

LX172, LX176 LX178 and LX186 Lawn Tractors (Serial No. 010,001-)



JOHN DEERE

OPERATORS MANUAL

**LX172, LX176 LX178 and LX186 Lawn
Tractors (Serial No. 010,001-)**

OMM111804 H0 English

**John Deere
Lawn & Grounds Care Division
OMM111804 H0**

**LITHO IN U.S.A.
ENGLISH**



Introduction

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are U.S. customary units and their metric equivalents.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE IDENTIFICATION NUMBERS in the Specifications section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when

you order parts. If this manual is kept on the machine, also file the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.



JUN-24/JUL90

M72170

CALIFORNIA PROPOSITION 65 WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

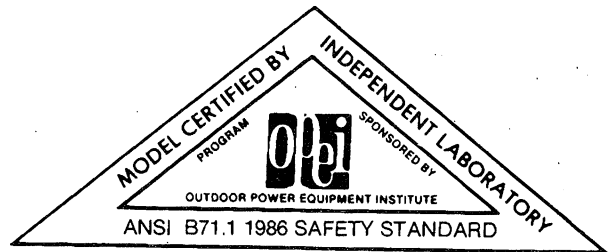
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A John Deere ILLUSTRATION™ Manual

Safety

OPEI CERTIFICATION

This OPEI Label on your mower indicates that this model has been certified by an independent laboratory for compliance with American National Standard B-71.1-1986, "Safety Specifications" for Power Lawn Mowers, Lawn and Garden Tractors, and Lawn Tractors.



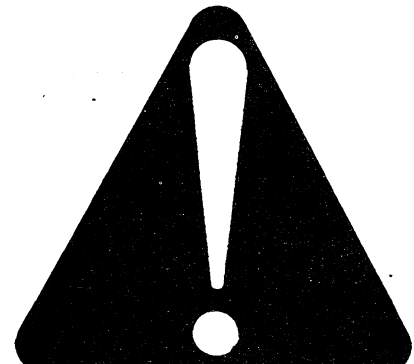
DX,CERT1 -19-04JUN90

TS288
-19-07OCT88

RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DX,ALERT -19-04JUN90

T81389
-UN-07DEC88

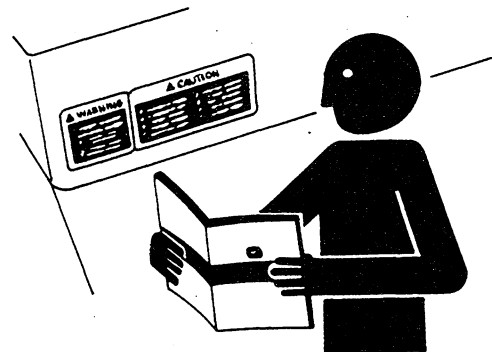
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.



DX,READ -19-04JUN90

TS201
-UN-23AUG88



UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

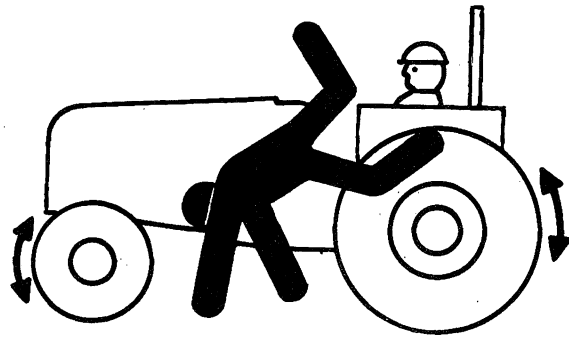
DX,SIGNAL -19-04JUN90

TS187
-19-30SEP88

KEEP RIDERS OFF MACHINE

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



DX,RIDER -19-04JUN90

TS290
-UN-23AUG88

PROTECT CHILDREN

Keep children and others away when you operate machine.

BEFORE YOU BACK UP:

- Stop the PTO.
- Look behind tractor for children.

Do not let children operate tractor.

Never carry children. Do not let children ride on tractor, mower, or any attachment.



MX,SAFM,A -19-07AUG90

M41274
-UN-06SEP88



AVOID TIPPING

Do not drive where machine could slip or tip.

Stay alert for holes, rocks, and roots in the terrain, and other hidden hazards. Keep away from drop-offs.

Slow down before you make a sharp turn.

Use care when pulling loads or using heavy equipment.

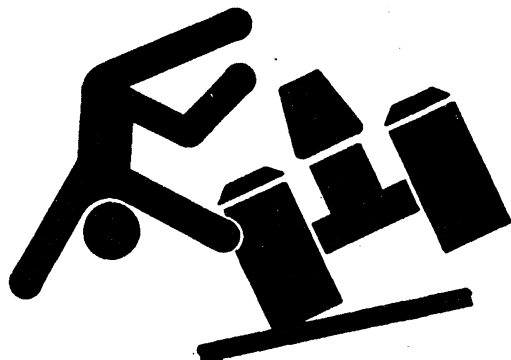
- Use only approved drawbar hitch points.
- Limit loads to those you can safely control.
- Use counterweights or wheel weights when suggested in this operator's manual.

Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing direction on slopes.

Do not stop or start suddenly when going uphill or downhill.

If machine stops going up hill:

- Stop the PTO.
- Back down slowly.



MX,SAFM,B -19-07AUG90

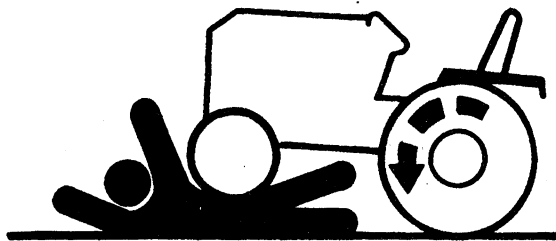
M41275 -JUN-06SEP88

PARK TRACTOR SAFELY

To park tractor safely:

1. Stop tractor forward or rearward travel.
2. Disengage PTO's.
3. Lower equipment to the ground.
4. Engage park brake.
5. Stop the engine.
6. Remove ignition key.

Before you leave the operator's seat, wait for engine and attachment parts to stop moving.



MX,SAFM,C -19-07AUG90

M41273 -JUN-06SEP88

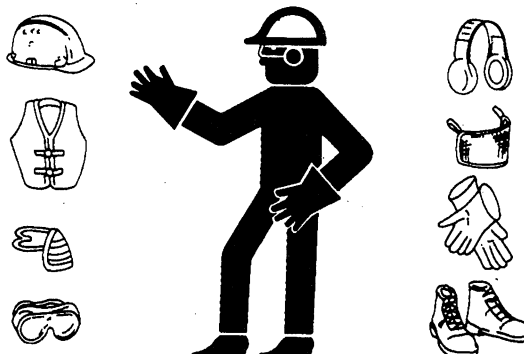


WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



DX,WEAR -19-04JUN90

TS206 -UN-23AUG88

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



DX,FIRE1 -19-04JUN90

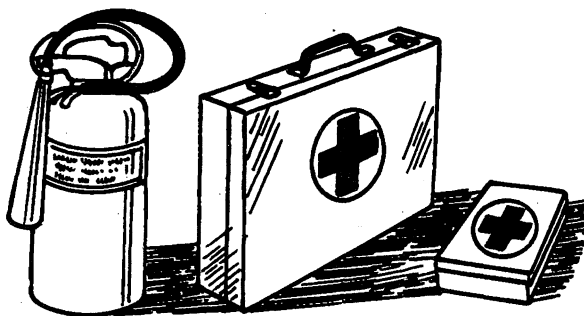
TS202 -UN-23AUG88

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



DX,FIRE2 -19-04JUN90

TS291 -UN-23AUG88



PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate or service machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.



DX,SERV

-19-04JUN90

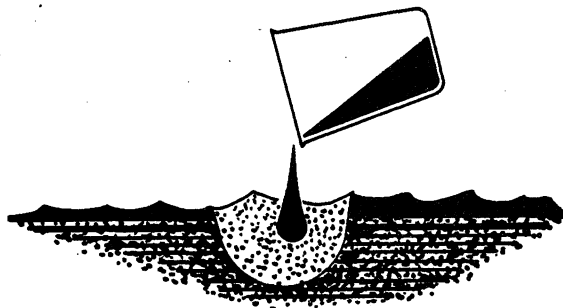
TS218 -UN-23AUG88

DISPOSE OF FLUIDS PROPERLY

Improperly disposing of fluids can harm the environment and ecology. Before draining any fluids, find out the proper way to dispose of waste from your local environmental agency.

Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

DO NOT pour oil into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, brake fluid, filters, batteries, and other harmful waste.



DX,DRAIN

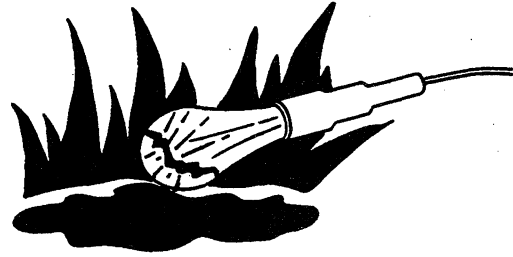
-19-05JUN90

TS222 -UN-23AUG88



ILLUMINATE WORK AREA SAFELY

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



DX,LIGHT -19-04JUN90

TS223 -JUN-23AUG88



CAUTION: Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never heat or weld on a wheel and tire assembly. The heat will cause an increase in air pressure in the tire. A tire explosion could result.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

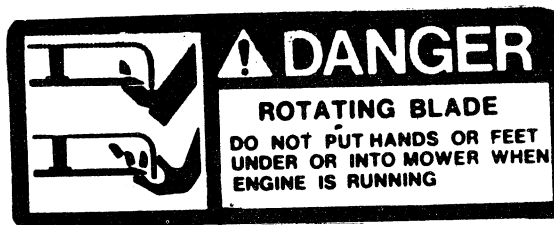


DX,TIRECP1 -19-30JUL90

TS952 -JUN-12APR90



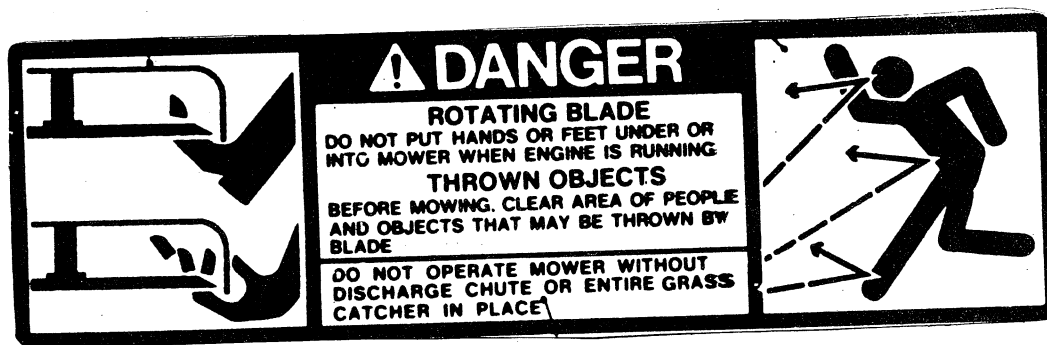
READ SAFETY SIGNS CAREFULLY



-19-10JUL90

M38614

Top, Left-Side of Mower Deck



-19-10JUL90

M38613

Top, Right-Side of Mower Deck Near Chute

Carefully read and follow all safety signs.

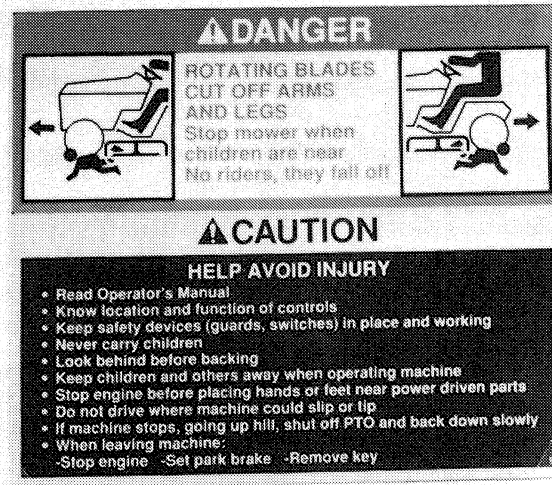
Danger signs identify the most serious hazards.

Keep safety signs in good condition. Replace any missing or damaged safety signs. Signs are attached to machine near specific hazard areas.

MX,SAFM,D -19-07AUG90



Caution signs call attention to safety messages in this manual.



Safety Sign on Tractor in Front of Seat

MX,SAFM,E -19-07AUG90

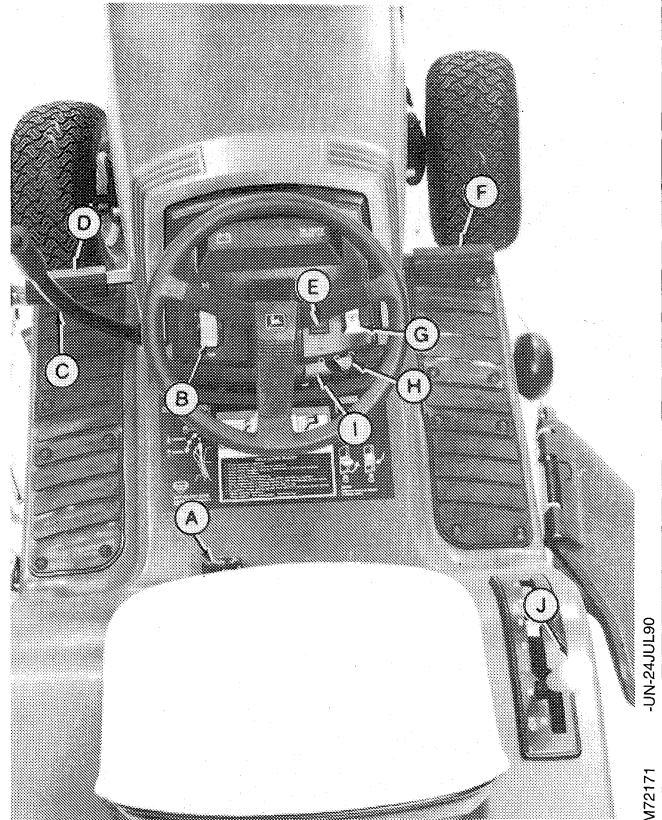
M72218 -19-24JUL90

Controls

OPERATOR PLATFORM CONTROLS

NOTE: LX172 Lawn Tractor illustrated.

- | | |
|--------------------------------|------------------------------------|
| A—Mower Depth Control | F—Brake Pedal (LX172 Tractor) |
| B—Throttle-Choke Lever | G—PTO Switch |
| C—Lift Lever | H—Ignition Key Switch |
| D—Clutch Pedal (LX172 Tractor) | I—Park Brake Lever |
| E—Light Switch | J—Gear Shift Lever (LX172 Tractor) |



MX,CTFM,A -19-07AUG90

M72171 -UN-24JUL90

TRANSMISSION AND BRAKE CONTROL PEDALS ON LX176, LX178 AND LX186 TRACTORS

- | | |
|------------------------|------------------------|
| A—Brake Pedal | C—Reverse Travel Pedal |
| B—Forward Travel Pedal | |



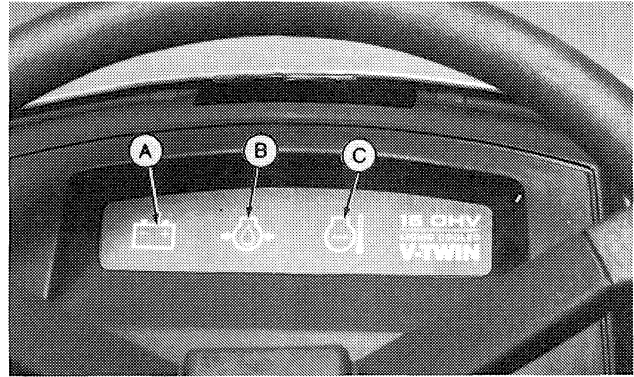
MX,CTFM,B -19-07AUG90

M72221 -UN-24JUL90

INDICATOR LIGHTS

NOTE: LX178 Tractor instrument panel illustrated.

- | | |
|--|---|
| A —Battery Discharge
Light (All Tractors) | C —Coolant
Temperature Light
(LX178 Tractor) |
| B —Engine Oil Pressure
Light (LX178 and
LX186 Tractors) | |

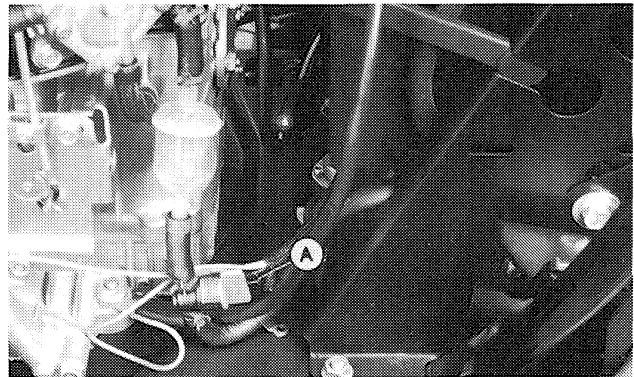


MX,CTFM,C -19-07AUG90

M72222 -UN-24JUL90

FUEL SHUT-OFF VALVE

- A**—Fuel Shut-Off Valve



MX,CTFM,D -19-07AUG90

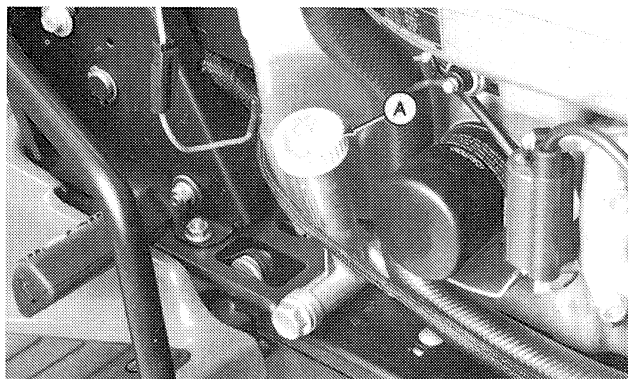
M72205 -UN-24JUL90

Operating the Engine

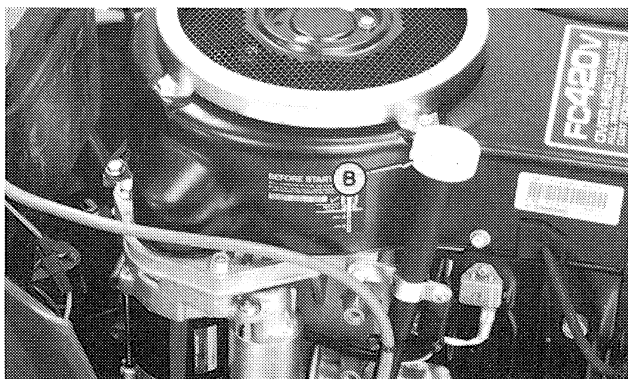
CHECKING ENGINE OIL LEVEL

1. Lift back of hood and tip hood forward for access to engine oil level dipstick (A) on LX178 Tractor or engine oil level dipstick (B) on LX172, LX176 or LX186 Tractors.

2. Check engine oil level when engine is cold before operating tractor. See Service section for checking and changing engine oil.



M72223 -UN-24JUL90



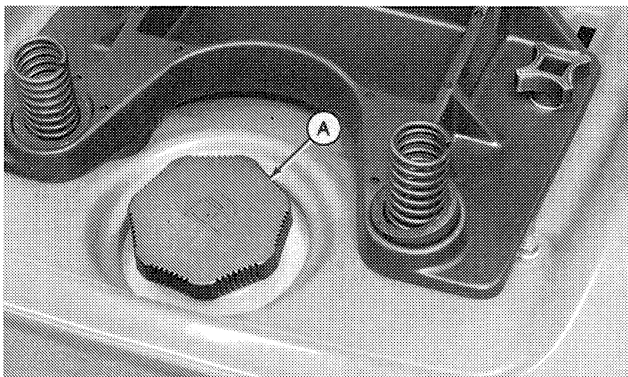
M72179 -UN-30JUL90

MX,OEFM,A -19-07AUG90

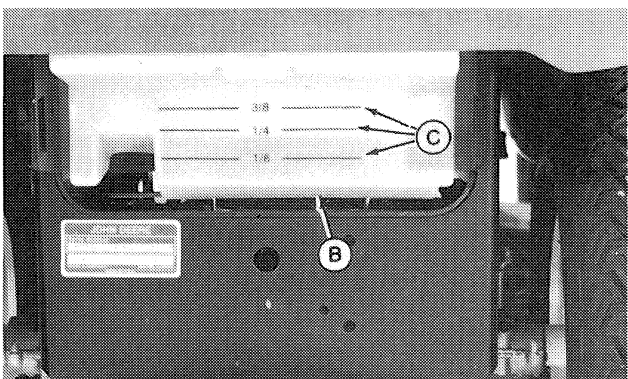
FILLING FUEL TANK

1. Tip seat forward for access to fuel tank cap (A).

2. Remove cap to fill fuel tank. The fuel tank (B) is translucent with graduated lines (C) showing how much fuel is in the tank. The engine is designed to use approximately one U.S. gallon of fuel per hour when mowing grass. See Fuels and Lubricants section for required fuel specifications.



M72189 -UN-24JUL90



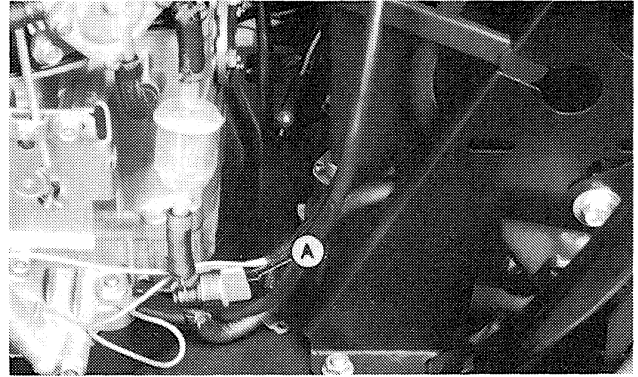
M72188 -UN-24JUL90

MX,OEFM,B -19-07AUG90

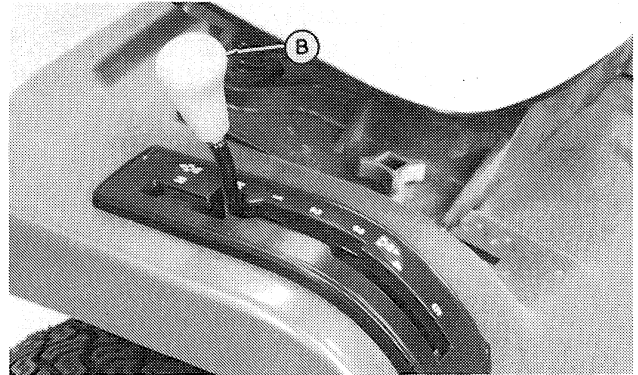
STARTING THE LX172 TRACTOR ENGINE

CAUTION: Start engine **ONLY** outdoors or in a well-ventilated place. Exhaust fumes are dangerous.

1. Lift rear of hood to open.
2. Turn knob (A) counterclockwise to position shown to open fuel shut-off valve. Close hood.
3. Move transmission shift lever (B) to N (neutral) position.



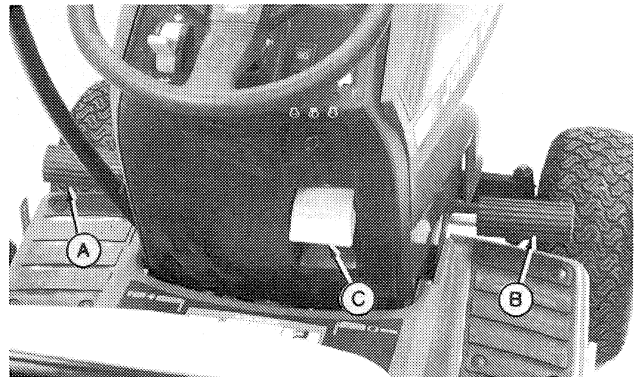
-JUN-24-JUL-90
M72205



-JUN-24-JUL-90
M72209

MX,OEFM,C -19-07AUG90

4. Push down on clutch pedal (A) and brake pedal (B). Hold pedals all the way down. Lift and hold park brake lever (C) to lock park brake. Remove feet from pedals and hand from park brake lever. Pedals should stay down and park brake lever should stay up in locked position.



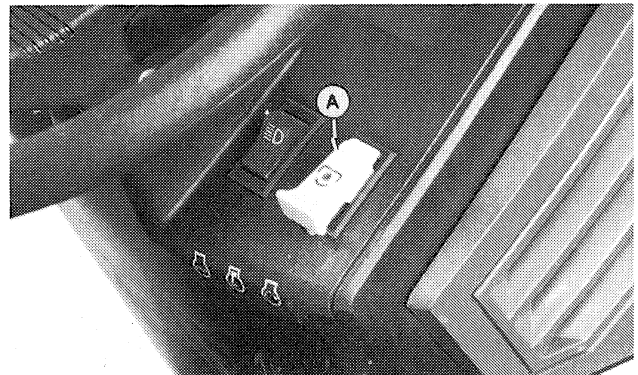
-JUN-24-JUL-90
M72204

MX,OEFM,D -19-07AUG90

NOTE: Your LX172 tractor has a neutral start safety switch. Engine will not start unless:

- PTO switch is OFF.
- Transmission shift lever is in N (neutral) position.

5. Push down on PTO switch lever (A) to OFF position.



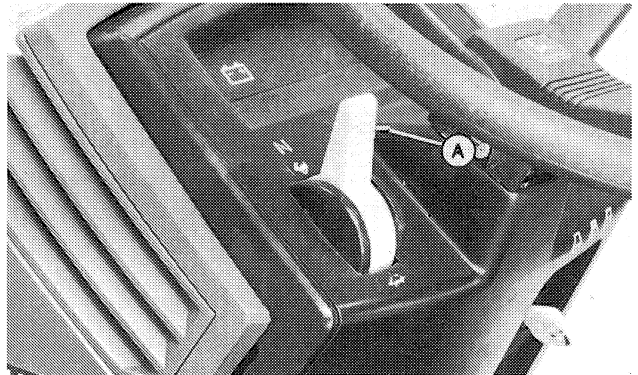
-JUN-24-JUL-90
M72207

MX,OEFM,E -19-07AUG90

Operating the Engine

NOTE: To attain choke position, push throttle lever (A) all the way up past detent in throttle lever mechanism.

6. Move throttle lever to choke position if engine is cold. Put throttle at half-speed position if engine is warm.

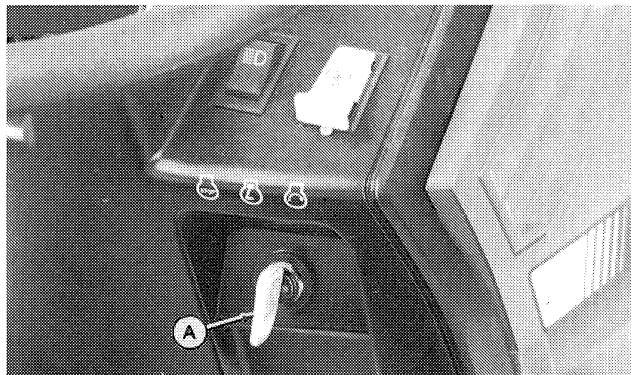


MX,OEFM,F -19-07AUG90

M72174 -UN-24JUL90

IMPORTANT: Do not operate starter more than 20 seconds at a time or you may damage it. If engine does not start, wait 2 minutes before you try again. If engine will not start, see Troubleshooting section.

7. Turn key (A) to START (clockwise) position.
8. When engine starts, release key to RUN position.
9. Move throttle lever down to half-speed position.
10. Let engine run for a couple of minutes to warm-up before operating tractor.



MX,OEFM,G -19-07AUG90

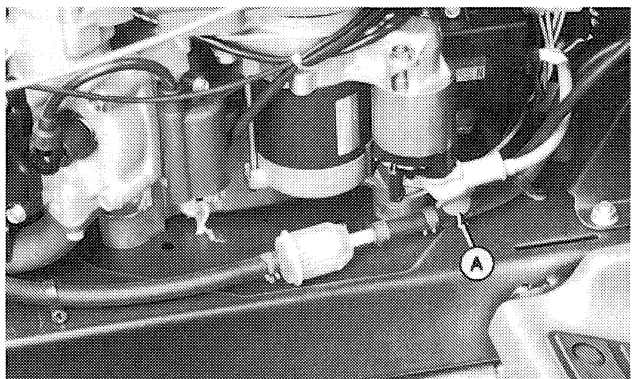
M72199 -UN-24JUL90

STARTING THE LX176, LX178 AND LX186 TRACTOR ENGINE

NOTE: LX178 Tractor illustrated.

CAUTION: Start engine **ONLY** outdoors or in a well-ventilated place. Exhaust fumes are dangerous.

1. Lift rear of hood to open.
2. Turn knob (A) counterclockwise (vertical position) to open fuel shut-off valve. Close hood.



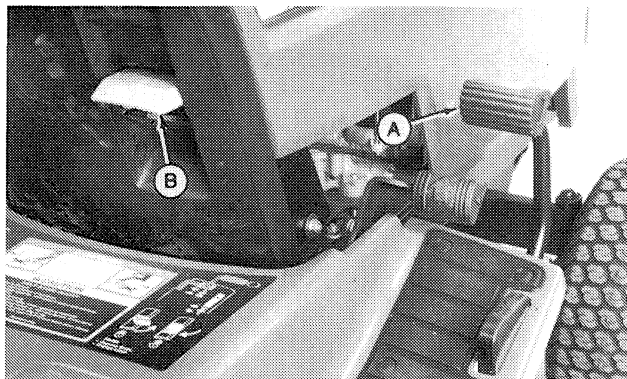
MX,OEFM,H -19-07AUG90

M72224 -UN-24JUL90

Operating the Engine

NOTE: You must hold brake pedal down, or lock park brake, before you can start engine.

3. Push down park brake pedal (A). Hold pedal all the way down and lift park brake lever (B) to lock park brake. Remove foot from pedal and hand from park brake lever. Pedal should stay down and park brake lever should stay locked up.

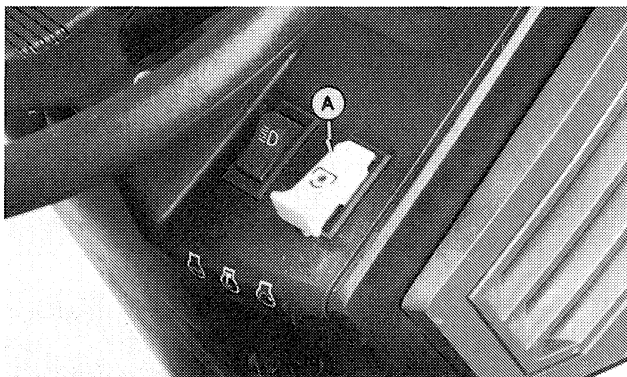


MX,OEFM,I -19-07AUG90

M72225 -UN-24JUL90

4. Push PTO switch (A) down to OFF position.

NOTE: Engine will not start unless PTO switch (A) is in OFF (down) position.

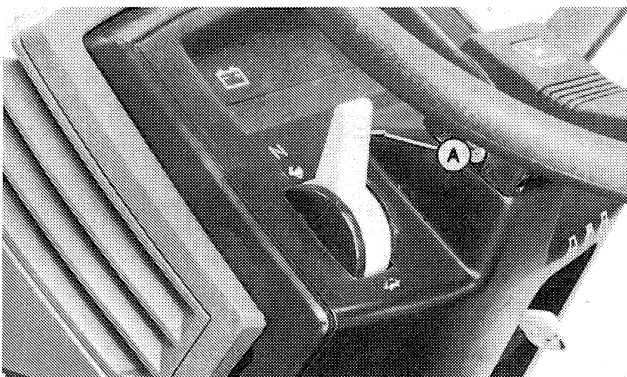


MX,OEFM,J -19-07AUG90

M72207 -UN-24JUL90

NOTE: To attain choke position, push throttle lever (A) all the way up past detent in throttle lever mechanism.

5. Move throttle lever to choke position if engine is cold. Put throttle at half-speed position if engine is warm.



MX,OEFM,K -19-07AUG90

M72174 -UN-24JUL90

IMPORTANT: Do not operate starter more than 20 seconds at a time or you may damage it. If engine does not start, wait 2 minutes before you try again. If engine will not start, see Troubleshooting section.

6. Turn key (A) to START (clockwise) position.
7. When engine starts, release key to RUN position.
8. Move throttle lever down to half-speed position.
9. Let engine run for a couple of minutes to warm-up before operating tractor.



M72199 JUN-24JUL90

MX,OEFM,L -19-07AUG90

COLD WEATHER STARTING (ALL TRACTORS)

1. Push throttle choke lever all the way up to CHOKE position.
2. Turn key to START position to crank engine.
 - Crank engine 5 seconds.
 - If engine does not start, wait 10 seconds.
 - Crank engine again 5 seconds.
 - Repeat this procedure if necessary.
3. When engine starts, release key to RUN position.
4. Move throttle lever to HALF-SPEED position as soon as it will continue running without choke.

MX,OEFM,L1 -19-07AUG90

CHECKING INDICATOR LAMPS

NOTE: All LX Series Tractors are equipped with a battery discharge light (A). The LX178 and LX186 Tractors are also equipped with engine oil pressure light (B). The LX178 Tractor is equipped with lights (A) and (B) and a coolant temperature light (C).

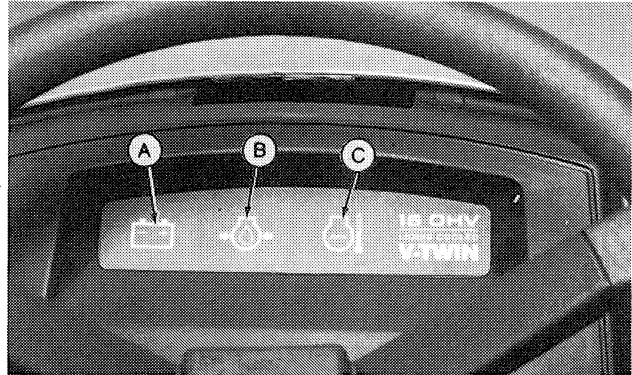
After engine starts:

Oil pressure light (B) should go out within 5 seconds.

Battery discharge light (A) should go out within 10 seconds. If not, move throttle lever to 3/4 position.

Coolant temperature light (C) should not come on unless engine is overheated. If light comes on, stop engine immediately and determine cause before operating engine.

If indicator lights stay on longer than given time, stop engine. Find and correct problem.



M72222 -UN-24JUL90

MX,OEFM,M -19-07AUG90

WARMING AND IDLING ENGINE

WARMING ENGINE

Run Engine at half speed for 2 to 3 minutes.

IDLING ENGINE

1. The engine is air-cooled on LX172, LX176 and LX186 Tractors and needs a large volume of air to keep cool. Keep grille, louvers, and screen (A) on top of engine clean. The engine is liquid cooled on the LX178 Tractor. (See CLEANING RADIATOR AND SCREENS in Service section.)

2. Avoid unnecessary engine idling.

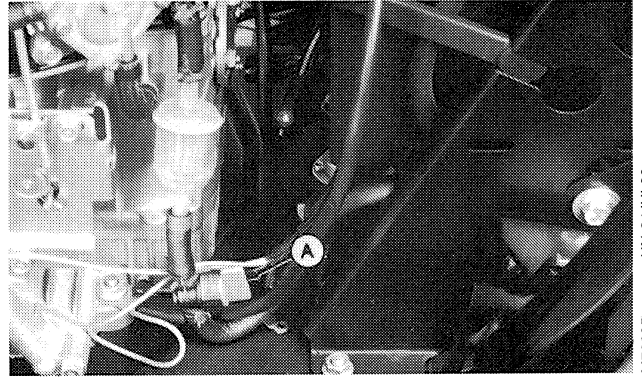


M72180 -UN-24JUL90

MX,OEFM,N -19-07AUG90

STOPPING ENGINE

1. Move throttle lever down to SLOW position. Let engine idle before you stop it.
2. Turn key to OFF position.
3. Remove key.
4. Lock park brake.
5. Open hood and close fuel shut-off valve (A) if tractor is parked in a building or being stored for a period of time. Turn knob clockwise to close fuel shut-off valve (A).



MX,OEFM,O -19-07AUG90

M72205 -JN-24JUL90

Driving the Tractor

SAFE DRIVING PRACTICES

For your safety and peace of mind, please adhere to these recommended safe driving practices.

1. NEVER give a child or any other person or pet a ride on tractor or attachments.
2. Keep children, other people, and pets away from tractor and attachments when operating.
3. Keep the tractor and attachments properly maintained and in good working order. Keep all shields and guards in place.
4. NEVER operate the tractor or attachments when you are tired or ill.
5. Pick up all obstacles from tall grass or weeds that could be thrown by mower blades before operating the mower.
6. Try to do most of your tractor work during daylight hours.
7. Plan your operation by using good common sense in regard to changing operating conditions, etc.

MX,DTFM,A -19-07AUG90

CARE OF TRACTOR FINISH

IMPORTANT: Insect repellent spray may damage painted surfaces. Do not spray insect repellent near tractor.

To restore scratched or dull finish on hood or body:

- Clean the surface with warm, soapy water and soft cloth (cotton).
- Dry the surface with a clean, soft cloth.
- Apply an orbital-polisher wax to the polishing bonnet of the orbital polisher.
- Operate polisher at low speed: approximately 2400 rpm.

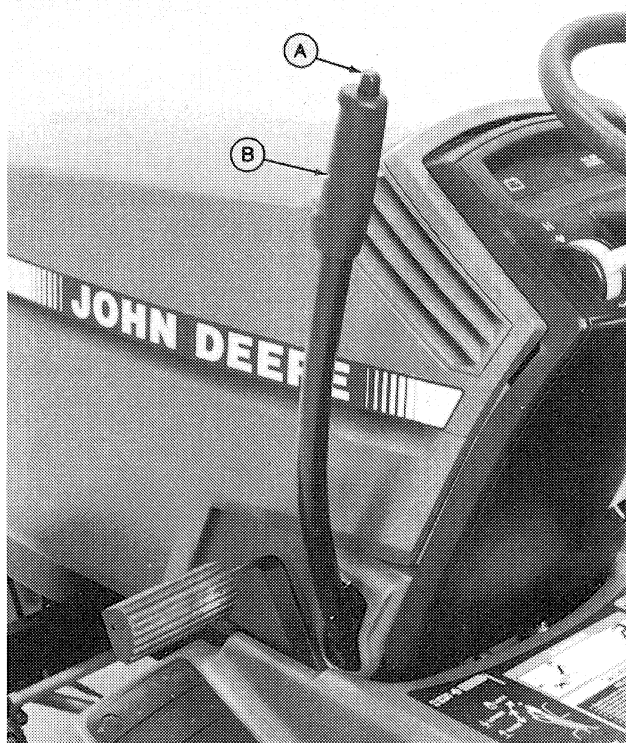
- Apply wax with long, smooth strokes.
- As wax begins to cake, stop applying wax.
- Let wax dry 5—10 minutes.
- Wipe surface with a clean, soft cloth.
- If finish is not glossy enough, apply more wax. Follow procedure above.

MX,DTFM,A1 -19-07AUG90

USING LIFT LEVER

NOTE: See special instructions in Operating the Mower section of this manual or other attachment manuals when using the lift lever.

1. Pull or push on lever (B) slightly and then push down button (A) with thumb to unlock lever.
2. Move lever forward to lower attachment.
3. Pull lever back to raise attachment.
4. Lever will only stay locked in place when pushed completely forward or pulled completely rearward.

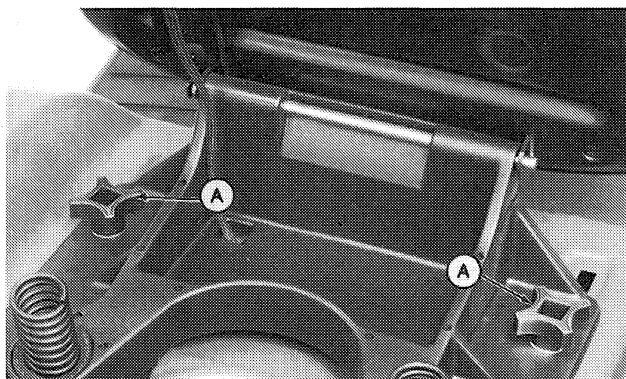


MX,DTFM,B -19-07AUG90

M72203 -UN-24JUL90

ADJUSTING SEAT

1. Tip seat forward and loosen two knobs (A) to slide seat assembly forward or rearward to most comfortable operator position.
2. Tighten knobs after adjustment to keep seat in place.



MX,DTFM,C -19-07AUG90

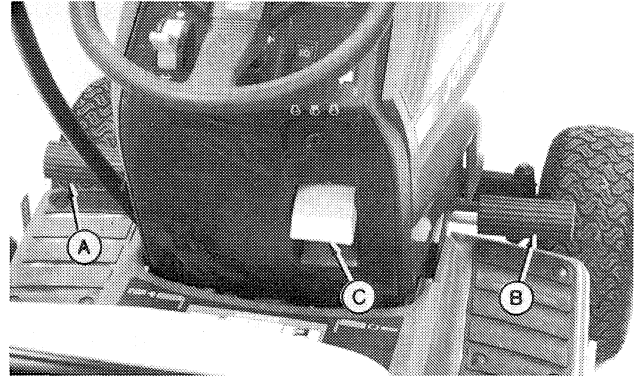
M72193 -UN-24JUL90

USING PARK BRAKE ON LX172 TRACTOR

LOCKING BRAKE

CAUTION: Always lock park brake before getting off tractor or leaving tractor unattended.

1. Push brake pedal (B) and clutch pedal (A) all the way down and lift park brake lever (C).
2. Release pedals and take hand off park brake lever. Pedals should stay down and park brake lever locked in up position.



M72204 -UN-24JUL90

UNLOCKING BRAKE

1. Push down and hold pedals.
2. Push park brake lever down.
3. Release pedals.

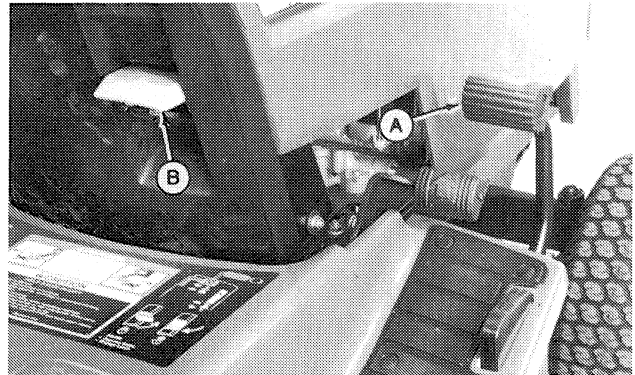
MX,DTFM,D -19-07AUG90

USING PARK BRAKE ON LX176, LX178 AND LX186 TRACTORS

LOCKING BRAKE

CAUTION: Always lock park brake before getting off tractor or leaving tractor unattended.

1. Push and hold brake pedal (A) all the way down.
2. Lift park brake lever (B) up and slowly take foot off brake pedal to lock park brake. Brake pedal should stay down and park brake lever should stay locked in up position.



M72225 -UN-24JUL90

UNLOCKING BRAKE

1. Push down and hold brake pedal (A).
2. Push park brake lever (B) down.
3. Take foot off brake pedal.

MX,DTFM,E -19-07AUG90

USING LX172 TRACTOR GEAR TRANSMISSION

MOVING FORWARD

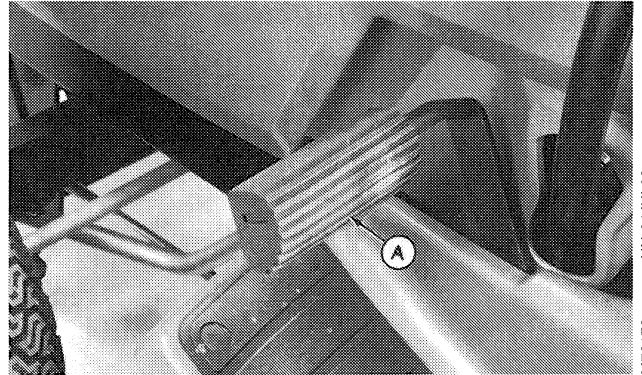
1. Push down clutch pedal (A).
2. Move shift lever (B) to desired gear.
3. Release clutch pedal slowly.

IMPORTANT: Always depress clutch pedal before shifting gears. You do not have to stop tractor to shift on the go, but do not shift on the go when tractor is under extreme load. To shift on the go, follow steps 1, 2, and 3 above.

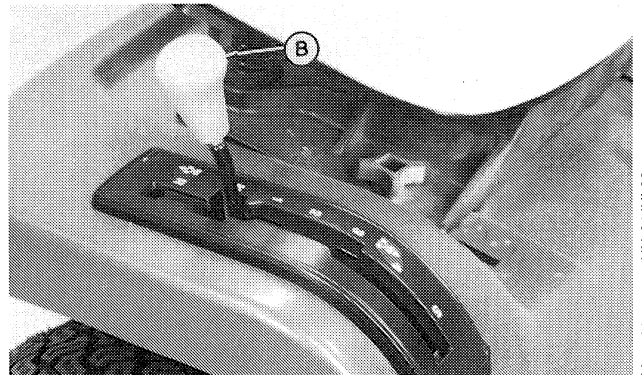
MOVING IN REVERSE

CAUTION: Look behind tractor to be sure area is clear of people, pets, or obstacles.

1. Push clutch pedal all the way down to stop tractor.
2. Move shift lever to R (reverse) position.
3. Release clutch pedal slowly.



M72172
-JUN-24JUL90



M72209
-JUN-24JUL90

STOPPING THE LX172 GEAR TRANSMISSION TRACTOR

IMPORTANT: Be sure to push down clutch pedal (A) first before brake pedal (B) to prevent premature brake lining wear.

1. Push down clutch pedal (A) and brake pedal (B) for normal or emergency stopping.
2. Move transmission shift lever (C) to N (neutral) position.



MX,DTFM,G -19-07AUG90

M72219 -UN-24JUL90

TRAVELING AND STOPPING LX176, LX178 AND LX186 TRACTORS

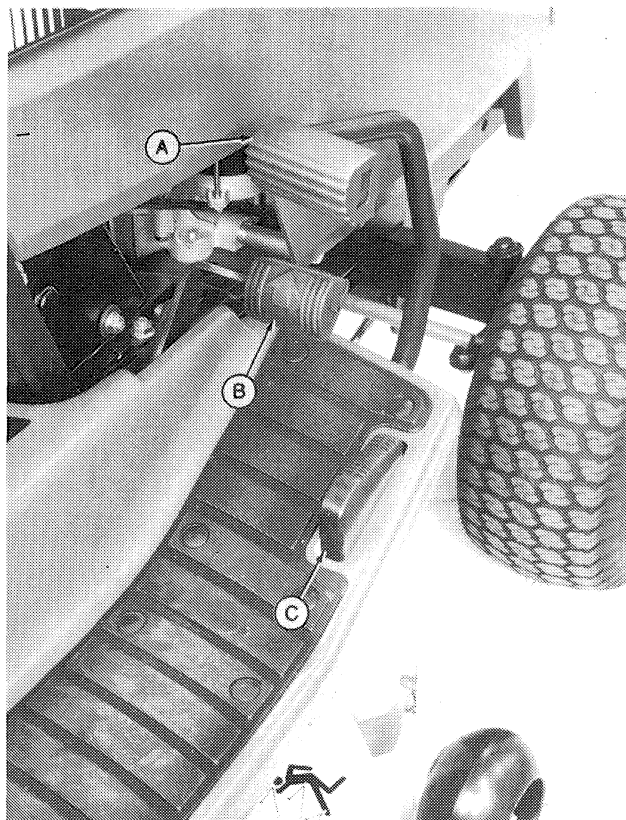
1. UNLOCK park brake:
—See USING PARK BRAKE.

2. To travel forward, push pedal (B).

CAUTION: Before you back the tractor, LOOK CAREFULLY behind it for children.

3. To travel in reverse, pivot foot from pedal (B) to push pedal (C).

4. For emergency stop, push brake pedal (A). Travel pedal (B or C) will return to neutral.



MX,DTFM,H -19-07AUG90

M72221 -UN-24JUL90

Operating the Mower

OPERATE MOWER SAFELY

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

Learn how to operate tractor and mower correctly.

Check: all parts should be in good condition and fastened in place.

Wear hard shoes or boots and clothing that is not loose.

Clear the mowing area of objects that might be picked up and thrown.

Clear the mowing area of people and pets.

Test drive the area with PTO switch in "OFF" position and mower in down position.

Trim low-hanging branches to prevent eye injuries.

Wear fairly tight clothing . . and safety equipment.

MX,OMFM,A -19-07AUG90

USING LIFT LEVER

Check out the three different lift lever positions before operation:

- **UPPER POSITION:** Raises mower for transport.
- **MIDDLE “FLOAT” POSITION:** Mower should drop to desired cutting height by itself. **UNDER NORMAL CONDITIONS, MOW WITH LEVER IN MIDDLE POSITION.**
- **LOWER “LOCK-OUT” POSITION:** Locks out lift assist spring. Use when mowing in rough terrain to prevent mower from inadvertently latching into transport position.

1. When lever (B) is in middle FLOAT position:

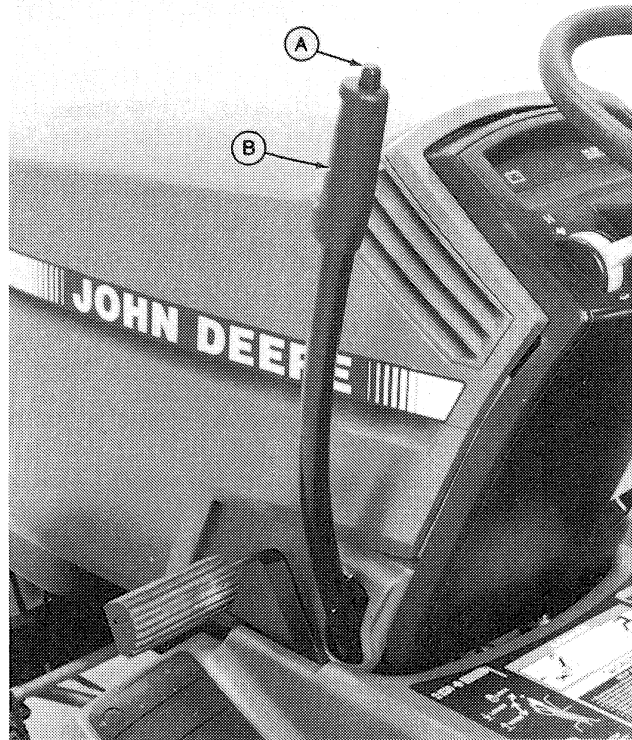
- Lift mower to **TRANSPORT** position by pulling lever all the way back until it clicks.
- Lower mower to **LOCK-OUT** position by pushing lever forward until it clicks.

2. To take mower out of **TRANSPORT** position:

- Pull lever (B) back slightly.
- Push in button (A).
- Push lever forward.

3. To take mower out of **LOCK-OUT** position:

- Push down on lever (B) slightly.
- Push in button (A).
- Pull lever back towards you.



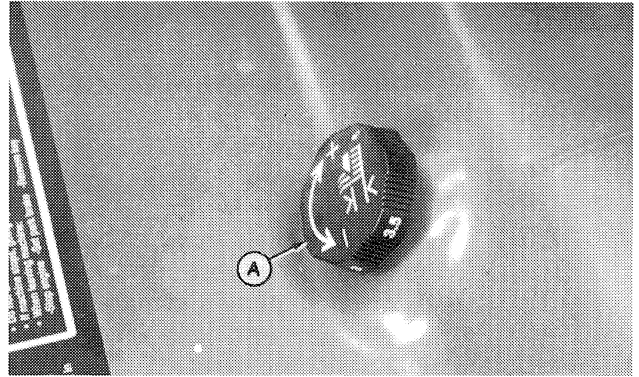
MX,OMFM,A1 -19-07AUG90

ADJUSTING CUTTING HEIGHT

IMPORTANT: Lift lever must be in locked-up (transport) position before turning cutting height knob (A).

Cutting height can be adjusted from approximately 1 to 4 in. (25 to 100 mm). When lift lever is locked in the transport position (all the way back), the cutting height is approximately 4 in. (100 mm). Knob (A) has cutting height identification numbers embossed in it. To change or attain cutting height desired, do as follows:

1. Pull lift lever all the way back in transport position.
2. Turn cutting height knob (A) to desired cutting height position. Mower will be at this cutting height each time you lower it.



M72185 -UN-24JUL90

MX,OMFM,B -19-07AUG90

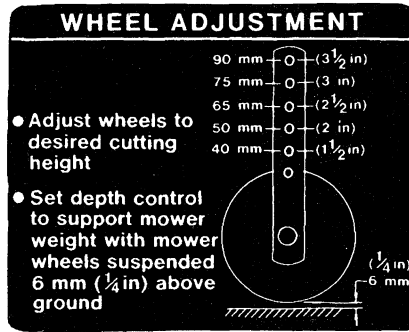
ADJUSTING 38-INCH MOWER WHEELS



CAUTION: Before you adjust wheels:

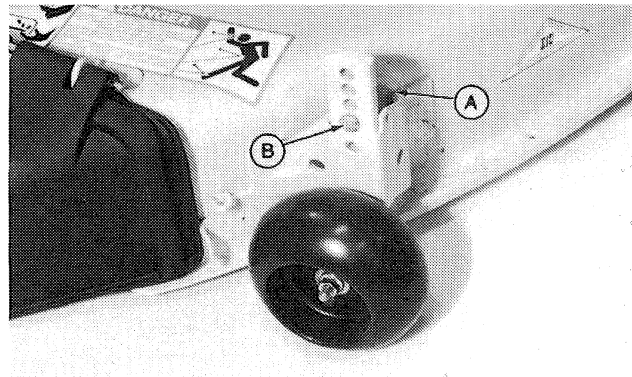
- Stop engine.
- Remove ignition key.
- Wait for blades to stop.

IMPORTANT: The mower wheels must not ride on the ground to support mower weight. Observe decal shown at right which is attached to mower deck when adjusting mower wheels.



Adjust wheels each time you change cutting height.

1. Check tractor tire pressure. Inflate tires equally. (See CHECKING TIRE PRESSURE in Service section.)
2. Remove spring locking pin (A) and drilled pin (B) from each wheel.
3. Move lift lever forward to lower mower to desired cutting height.
4. Bottom of wheels should be approximately 1/4 in. (6 mm) from the ground when properly adjusted.
5. Install drilled pins (B) in nearest hole. Fasten pins with spring locking pins (A).



MX,OMFM,C -19-07AUG90

M31563 -19-13MAR89

M72226 -JUN-24-JUL90

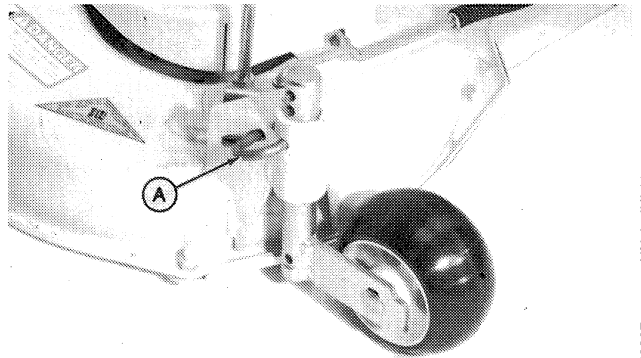
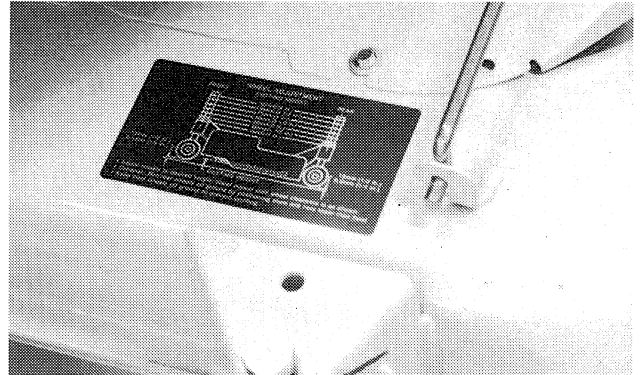
ADJUSTING 48-INCH MOWER WHEELS

NOTE: The best even cut can be achieved by keeping the rear mower wheels off the ground.

To more closely follow ground contour in special conditions, rear mower wheels can be used to support deck by setting wheels one hole lower.

The front wheels should always be kept off the ground to minimize scuffing.

1. Check tractor tire pressure. Inflate tires equally. (See CHECKING TIRE PRESSURE in Service section.)
2. Pull out on J-pin (A) to move mower wheels up or down until wheels are approximately 1/4—3/4 in. (6—19 mm) above mowing surface. Release J-pin to lock wheels in position. Be sure all wheels are adjusted to same position.
3. Observe decal attached to mower for wheel positions.



MX,OMFM,C1 -19-07AUG90

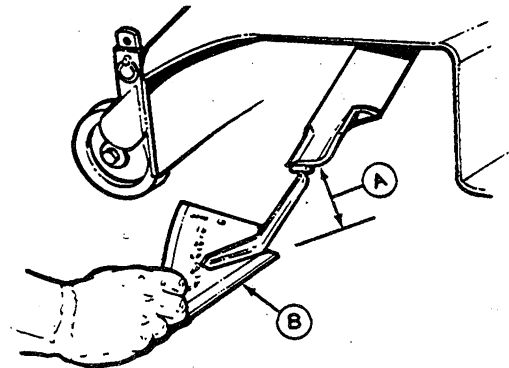
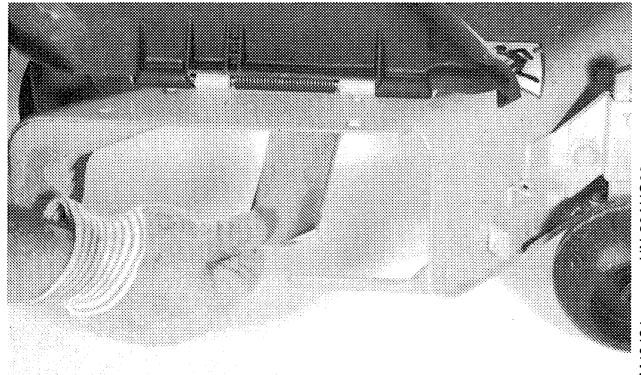
ADJUSTING MOWER LEVEL SIDE-TO-SIDE

CAUTION: Before you adjust mower, stop engine and remove ignition key.

1. Park tractor on a hard, level surface.
2. CHECK: Tire pressures must be correct. (See CHECKING TIRE PRESSURE in Service section.)
3. Adjust cutting height to 2 in. (50 mm).
4. Turn left blade by hand parallel to tractor axle. Hold drive belt and turn right blade parallel to axle.

NOTE: A convenient levelling gauge (B) is available from your John Deere dealer. Order Part No. TY15272.

5. Measure from each outside blade tip (A) to the level surface. The difference between measurements must not be more than 1/8 in. (3 mm).



MX,OMFM,D -19-07AUG90

6. Adjustable lift link (shown) is on right side of mower.

7. Turn nut (A) clockwise to raise right side of mower.
Turn nut counterclockwise to lower right side.



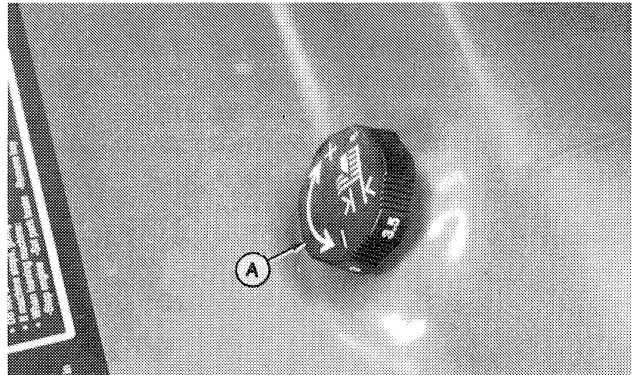
MX,OMFM,E -19-07AUG90

M72196
-UN-24JUL90

ADJUSTING MOWER LEVEL FRONT-TO-REAR

CAUTION: Before you adjust mower, stop engine and remove ignition key.

1. Park tractor on a hard, level surface.
2. CHECK: Tire pressure must be correct. (See CHECKING TIRE PRESSURE in Service section.)
3. Pull lift lever all the way back. Turn mower depth control knob (A) to adjust cutting height to 2 in. (50 mm). Move lift lever forward to lower mower to cutting height.



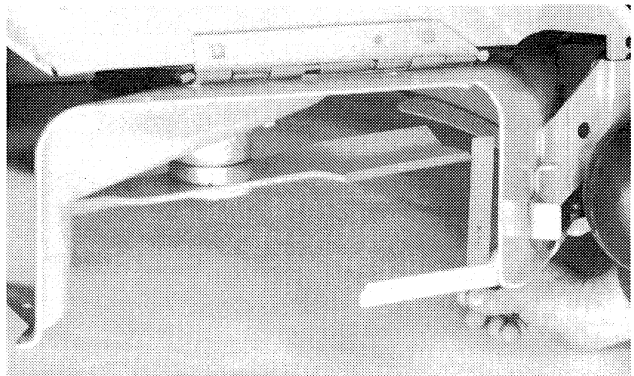
MX,OMFM,F -19-07AUG90

M72185
-UN-24JUL90

4. Turn left blade by hand so a blade tip points straight forward.

5. Hold drive belt and turn right blade straight forward.

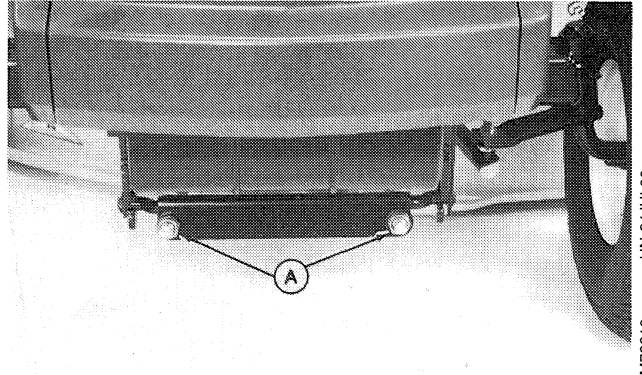
6. Measure from each blade tip to the level surface. The front blade tips must be 1/8 to 1/2 in. (3 to 13 mm) lower than rear blade tips.



MX,OMFM,G -19-07AUG90

M39912
-UN-29AUG88

7. Loosen rear nuts on adjusting bolts (A) and turn front nuts clockwise to raise front of mower deck or counterclockwise to lower front of mower deck. Tighten rear nuts after adjustment is completed.



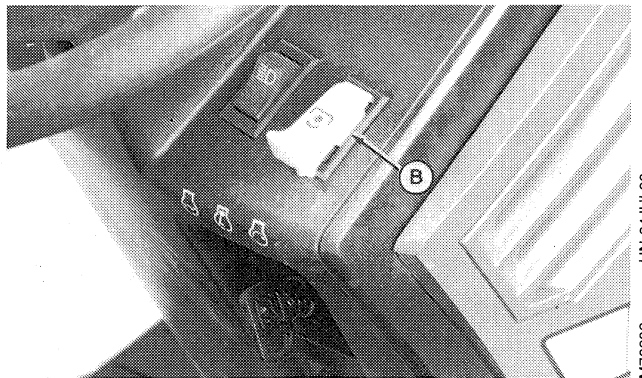
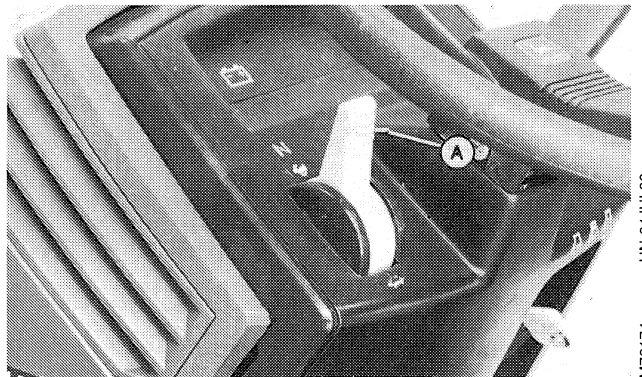
MX,OMFM,H -19-07AUG90

M72216
-UN-24JUL90

ENGAGING AND DISENGAGING MOWER

IMPORTANT: To help prevent damage to PTO clutch, engage mower at one-third to one-half throttle. Operate engine at maximum speed when mowing or after PTO clutch is engaged.

1. Move throttle lever (A) to ONE-THIRD engine speed position.
2. Move PTO switch lever (B) to ON position to ENGAGE mower drive.
—Pull PTO switch lever to rear and lift to ON position.
3. Push rear of PTO switch lever down to OFF position to DISENGAGE mower.



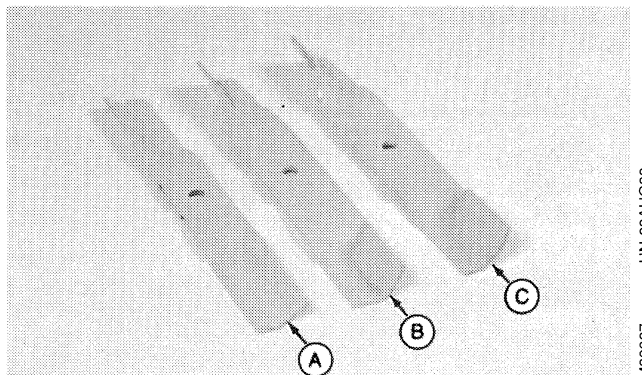
MX,OMFM,I -19-07AUG90

M72174
-UN-24JUL90

M72206
-UN-24JUL90

USING CORRECT BLADES—38 INCH MOWER ONLY

- A— Low-lift blade: for dusty or dirty conditions, not for bagging.
B— Medium-lift blade: standard blade for use without bagger. Also for bagging an average stand of grass regularly.
C— High-lift blade: for cutting and bagging thick, tall grass and/or leaves.



MX,OMFM,J -19-07AUG90

M39927
-UN-29AUG88

MOWING TIPS

NOTE: When mowing grass on smooth terrain, *DO NOT* push lift lever all the way forward to the lock-out position. When mowing grass on rough terrain, push lift lever all the way forward to the lock-out position.

Mow grass only when it is dry: Wet grass may plug mower and leave a trail of grass clumps.

Mow grass often: Short grass clippings will decay quickly.

Mow at full throttle for optimum performance.

Most lawn-care professionals recommend mowing high and often. Cutting grass too short may kill grass and let weeds grow easily.

Keep blades sharp: Dull blades will tear grass; tips of grass will then turn brown.

Before you make a turn, slow down. Short, fast turns may scuff the ground and pull grass out by roots.

Check lawn regularly for uneven cut. If cut is uneven:
—LOOK: Mower must be level. See **LEVELING MOWER** in this section.

—Slow down before you make a turn.

—Sharpen blades often.

MX,OMFM,K -19-07AUG90

MOWING TALL GRASS

First method: mow grass twice:

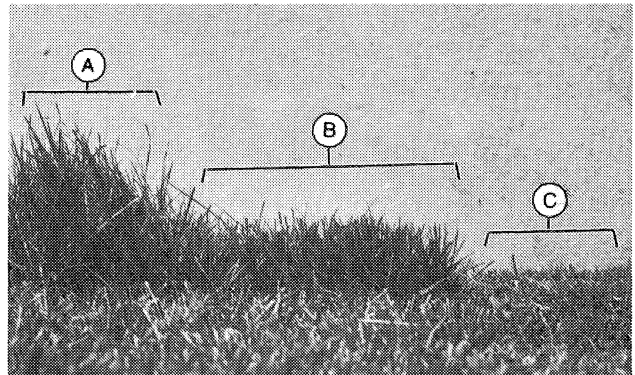
—Adjust cutting height to mow tall grass (A) to half height (B).

—Before second pass, adjust cutting height for desired height (C).

Second method:

—Mow at desired height at slow travel speed, full width OR

—Mow at desired height using only half of cutting width.



MX,OMFM,L -19-07AUG90

PREVENTING UNEVEN CUT

Check adjustment of mower wheels. (See ADJUSTING WHEELS in this section.) Check tire pressure.

Check mower level. (See ADJUSTING MOWER LEVEL in this section.)

Slow down before you make a turn.

Keep mower blades sharp.



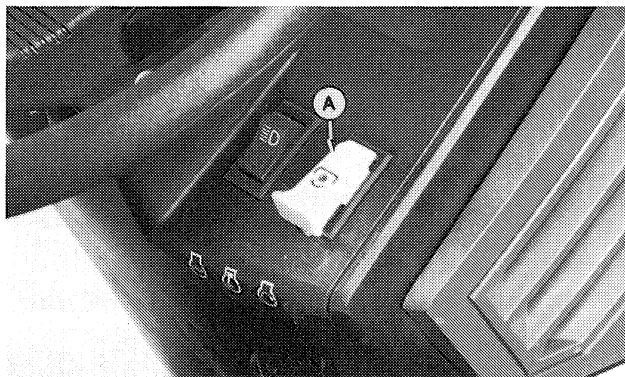
MX,OMFM,L1 -19-07AUG90

M32860 -UN-25AUG88

DISMOUNTING TO INSPECT OR UNPLUG MOWER OR OPTIONAL GRASS BAGGER

CAUTION: To help prevent personal injury, follow these steps before you dismount to inspect or unplug mower or bagger.

- Stop tractor.
- Lock park brake.
- Push PTO switch lever (A) down to OFF position to DISENGAGE mower drive.
- Move throttle lever to rear to SLOW position.
- Stop engine. Remove ignition key.
- Wait for all moving parts to stop.



MX,OMFM,M -19-07AUG90

M72207 -UN-24JUL90

OPERATING OPTIONAL BAGGING ATTACHMENT

Read CAUTION and WARNING safety signs attached to hopper top, bags and chute.

1. STOP mower and tractor engine before you remove or install grass bags or chute.
2. Do not operate on steep slopes.
3. Do not change ground travel speed when you operate on inclines.
4. Do not operate uphill with grass bags full of leaves or clippings.
5. Do not leave grass or leaves in bags overnight.
6. Do not store tractor with grass or leaves in bags to prevent:
 - Rotting of bags.
 - Spontaneous combustion.



CAUTION

- Bag is subject to wear and deterioration.
- Check bag frequently, replace when necessary
- Use a John Deere bag or equivalent to comply with safety specifications.



WARNING

Do not operate mower without grass bag attached.



WARNING

OBJECTS MAY BE THROWN FROM MOWER

- Do not open catcher while blades are turning
- Shut off engine before removing or installing bag
- Operate mower with complete bagging attachment in place

M40436 -19-14MAR89

MX,OMFM,N -19-07AUG90

MOWING AND BAGGING TIPS

1. Mow and bag grass when it is dry and not too tall or dense.
2. Operate tractor at a slow travel speed and engine at maximum speed.
3. Keep mower deck, bagging chute, hopper top screen, and bags clean.
4. Install correct blade(s). (See USING CORRECT BLADES in this section.)
5. Operate mower in the higher cutting positions to permit maximum air flow. Mow grass twice if it is longer than normal.

6. Empty the bags often to prevent plugging. Adjust rear of mower deck 1/2 in. (12.5 mm) higher than front of deck to provide more air flow.

NOTE: Dirty bags may cause chute to plug because of restricted air flow. Using plastic bags may cause chute plugging because of restricted air flow.

7. Put plastic garbage bags inside cloth bags to facilitate disposal of grass or leaves.

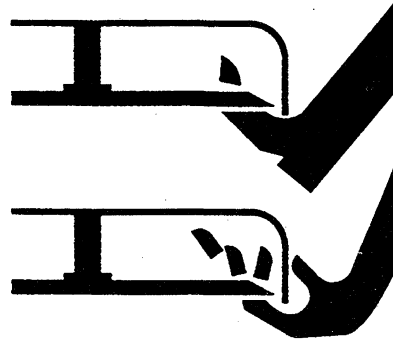
MX,OMFM,O -19-07AUG90

CHECKING FOR PLUGGING WHILE BAGGING

CAUTION: To help prevent injury from mower blades, do not try to unplug discharge chute while blades are turning.

If there is a trail of clippings behind mower, check for plugged chute or full bags.

If grass builds up in front of discharge chute outlet, check for plugged bagger chute.



M41421 -JUN-30AUG88

MX,OMFM,P -19-07AUG90

BETTER AIRFLOW FOR OPTIONAL GRASS BAGGER

Bagger needs strong airflow from mower to bags for best performance.

Keep bagger chute, hopper top, screen, bags, and underside of mower clean.

Keep throttle lever at FAST position but travel slow.

Level mower front-to-rear so rear of mower is no more than 1/2 in. (13 mm) higher than front of mower. See ADJUSTING MOWER in this section.

Install high-lift blades—38" mower only. See USING CORRECT BLADES in this section.

Operate mower in higher cutting positions.

MX,OMFM,Q -19-07AUG90

FILLING GRASS BAGS

Check level of clippings often.

When clippings are up to window of hopper top, empty bags or you may plug bagger chute.

Left bag normally fills first.

Right bag may not fill completely when you are cutting thin stand of grass.

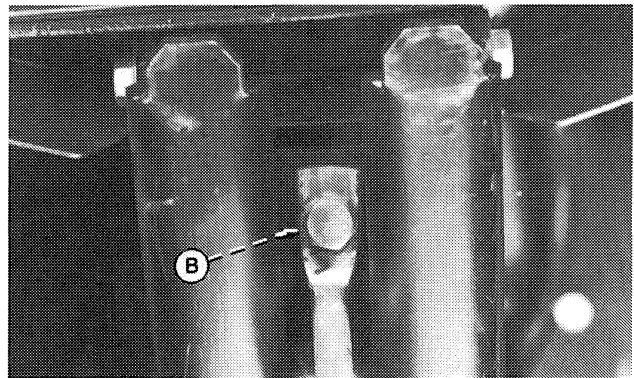
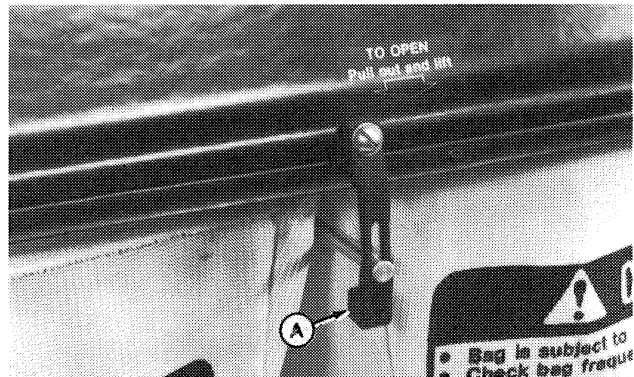
MX,OMFM,R -19-07AUG90

REMOVING AND EMPTYING BAGS

1. Pull down rubber latch (A) to disconnect it from retainer.

2. Raise hopper top.

NOTE: There should be 1 in. (25.4 mm) stretch in latch when connecting to retainer. If necessary, raise hopper top and remove bags to adjust retainer for correct latch stretch. Place flat washers between retainer and bag holder in position (B) to attain proper stretch or adjust tabs on bag frame.



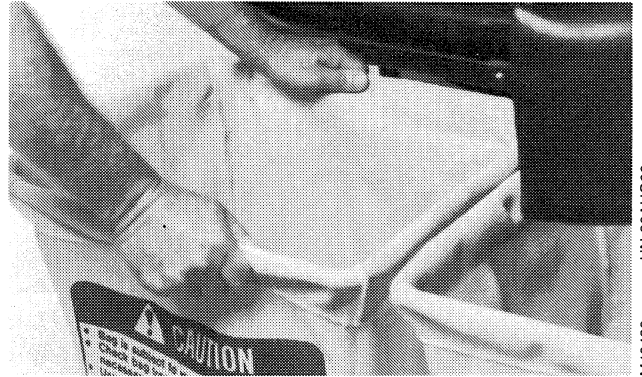
MX,OMFM,S -19-07AUG90

NOTE: If hopper top will not stay up when opened, tighten nuts (A) on two hinge bolts that attach hopper top to support post.

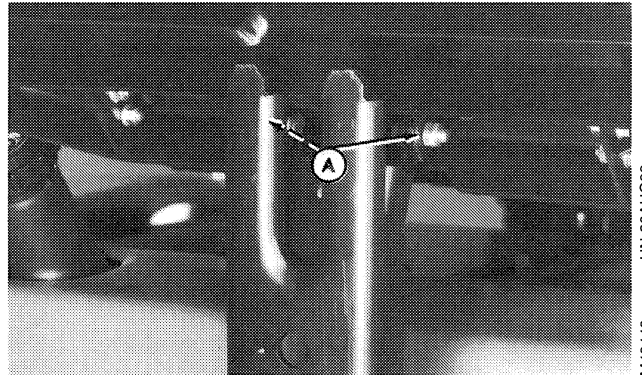
IMPORTANT: DO NOT OVER-TIGHTEN cap screws or damage may result:

- When properly tightened, hopper top should stay up in the **FULLY RAISED position ONLY**. The hopper top should not stay up in any **PARTIALLY OPENED position**.
- If these hinge cap screws are too tight, the hopper top may become deformed at the hinge area. This will cause an improper seal, create fatigue cracks in hopper top and crack the window.

3. Grasp bag support frame and lift bag off post hanger.
4. Grasp cord on bottom of bag to empty bag.



M40439 -JUN-30AUG88



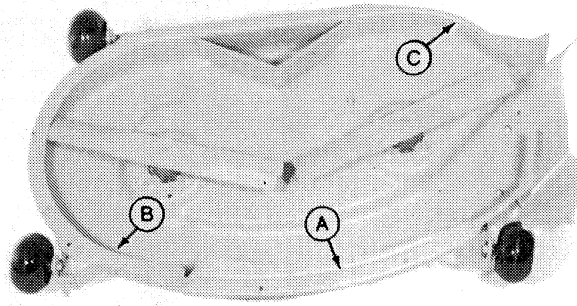
M40440 -JUN-30AUG88

MX,OMFM,T -19-07AUG90

BAGGING WITH BOLT-ON LIP SECTIONS (38-INCH MOWER ONLY)

A—Front Lip Section
B—Side Lip Section

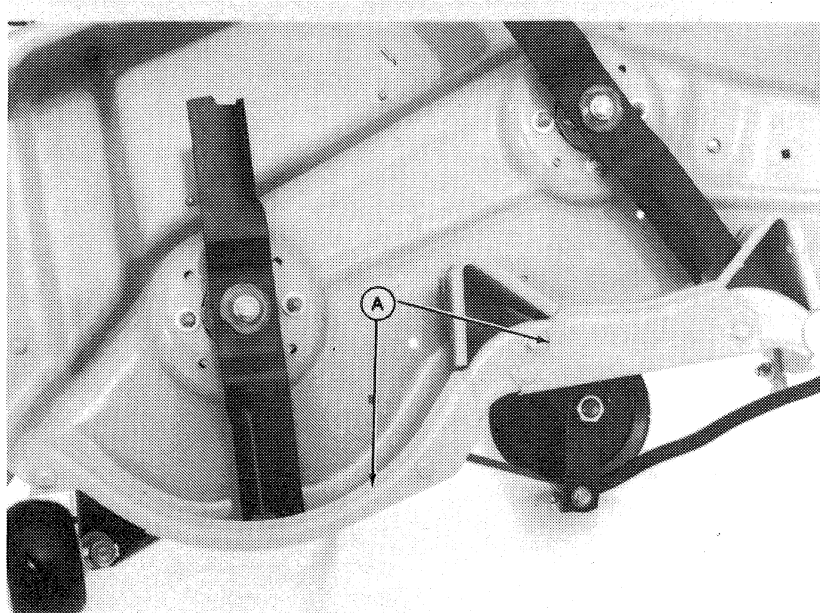
C—Rear Lip Section



MT2220 -UN-24JUL90

	Front Lip Section (Standard)	Side Lip Section (Optional)	Rear Lip Section (Optional)
FEATURES	<p>Reduces material blown out right front corner of deck.</p> <p>Helps keep engine and operator clean.</p> <p>Prevents leaves from blowing away from deck.</p> <p>Increase airflow from mower to bags.</p>	<p>Reduces material blown out left front corner of deck.</p> <p>Helps keep engine and operator clean.</p> <p>Eliminates material blown out on left side of deck when mowing along sidewalks and roadsides.</p>	<p>Creates vacuum effect that sweeps lawn clean.</p>
RECOMMENDED	Leave in place at all times.	Used with medium or high lift blades when bagging in dry, dusty conditions.	When bagging leaves, pine cones, needles, sticks, loose bark, or after thatching.
NOT RECOMMENDED		<p>When mowing long, lush or thick grass where poor cut quality is a problem.</p> <p>Not required with low lift blades.</p>	<p>When mowing long, lush or thick grass where poor cut quality is a problem.</p> <p>Not required when side discharging.</p>

BAGGING WITH OPTIONAL BOLT-ON LIP SECTIONS (48-INCH MOWER)



M74363
-UN-26JUN90

A—Optional Lip Sections

FEATURES

Center Rear Lip Section

Reduces material blown out front center of deck.

Helps keep engine and operator clean.

Prevents leaves from blowing away from deck.

Increase air flow from mower to bags.

Side Lip Section

Creates vacuum effect that sweeps lawn clean.

RECOMMENDED

Leave in place at all times.

When bagging leaves, pine cones, needles, sticks, loose bark, or after thatching.

NOT RECOMMENDED

When mowing long, lush or thick grass where poor cut quality is a problem.

Not required when side discharging.

USING FRONT WEIGHTS



CAUTION: Tractor front wheel weights improve stability in most slope operations. Add front wheel weights for better front-end stability and steering when using a rear mounted attachment or pulling a cart.

Install front wheel weights for better stability and steering control when you use equipment such as the rear-mounted grass bagger or dumpcart. A front wheel weight weighs 40 lb (18 kg). See your John Deere dealer for weights. Remove front wheel weights when not required.

MX,OMFM,V -19-07AUG90

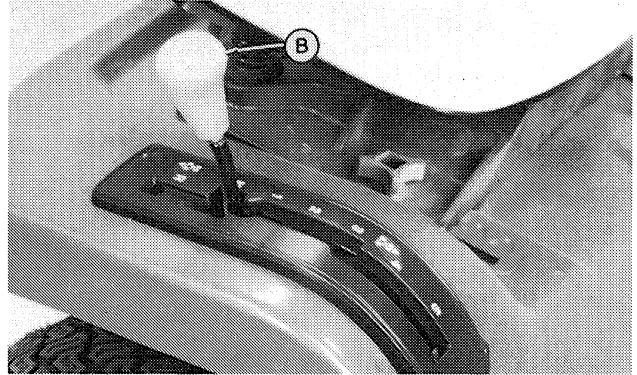
Transporting

PUSHING LX172 TRACTOR

IMPORTANT: Avoid transmission damage, DO NOT tow tractor.

To move tractor when engine is off:

1. Unlock park brake.
2. Depress clutch pedal and move shift lever (B) to N position.
3. Push tractor by hand to desired location.



-JUN-24-JUL-90
M72209

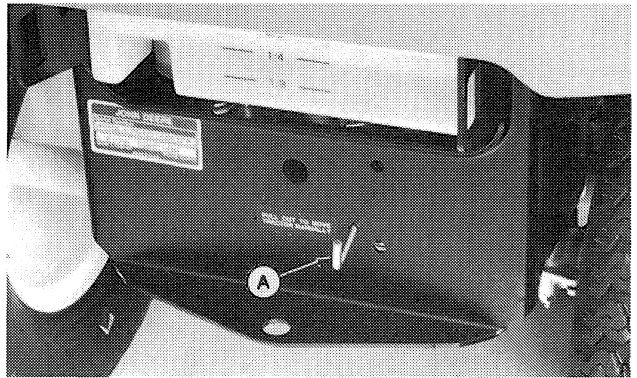
MX,TPFM,A -19-07AUG90

PUSHING LX176, LX178 OR LX186 TRACTOR

IMPORTANT: Avoid transmission damage, DO NOT tow tractor.

To move tractor when engine is stopped:

1. Unlock park brake.
2. Pull out on tow disconnect control lever (A).
3. Push tractor by hand to desired location.
4. Tow disconnect control lever will go back in when brake pedal is depressed to restart engine.

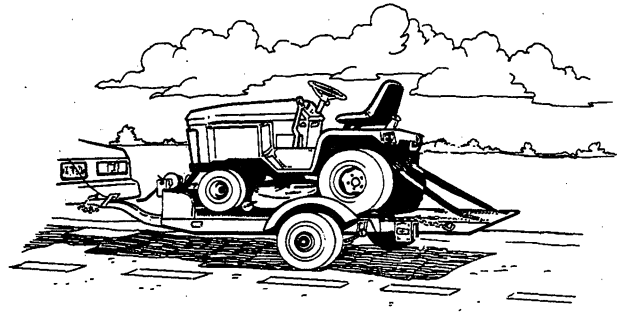


-JUN-24-JUL-90
M72228

MX,TPFM,B -19-07AUG90

TRANSPORTING

1. Do not tow lawn tractor.
2. Use a heavy-duty trailer to transport your lawn tractor.
3. Lower mower to trailer deck. Lock park brake.
4. Be sure trailer has all the necessary lights and signs required by law.
5. Fasten the lawn tractor to the trailer with straps, chains, or cables.



M34229 -UN-25AUG88

MX,TPFM,C -19-07AUG90

Fuels and Lubricants

BEFORE REFUELING TRACTOR

IMPORTANT: DO NOT mix oil with gasoline.

Follow steps listed below before refueling tractor:

1. Remove any trash from top of fuel tank drain area.
2. Use summer blended fuel for warm weather operation.
 - Use winter blended fuel for cold weather operation.
3. Never use fuel that is stale or has been stored for a long period of time:
 - Warm Weather—Maximum of 60 days.
 - Cold Weather—Maximum of 90 days.



MX,FLFM,A -19-07AUG90

-JUN-23AUG88
TS227

REFUELING TRACTOR SAFELY

 **CAUTION: Handle fuel carefully.**

Follow steps listed below when refueling tractor:

1. STOP engine.
2. Fill fuel tank outdoors.
3. If engine is hot, let engine cool several minutes before you add fuel.
4. Do not smoke while filling fuel tank or servicing fuel system.
5. Fill fuel tank only to bottom of filler neck.



MX,FLFM,A1 -19-07AUG90

-JUN-23AUG88
TS227

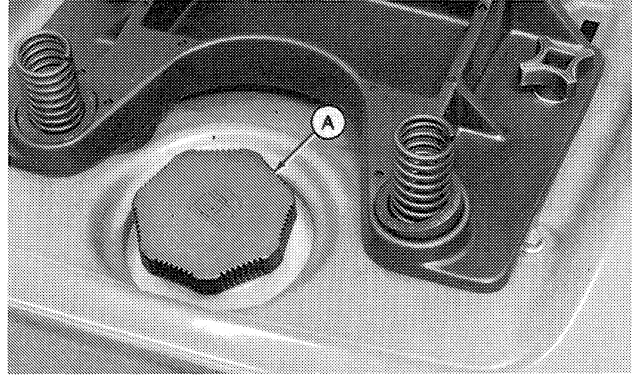
USING CORRECT FUEL

Unleaded fuel is recommended. Regular leaded gasoline with an anti-knock index of 87 or higher may be used. Unleaded fuel burns cleaner and leaves less unburned deposits in combustion chamber.

Use of gasohol is acceptable as long as the ethyl alcohol blend does not exceed 10 percent. Unleaded gasohol is preferred over leaded gasohol.

Fuel tank capacity is 2.5 gal (9.5 L).

Lift seat. Remove fuel tank cap (A). Fill fuel tank at end of each day's operation. This helps to keep condensation out of fuel tank. Install fuel tank cap.



M72189 -JUN-24JUL90

MX,FLFM,A2 -19-07AUG90

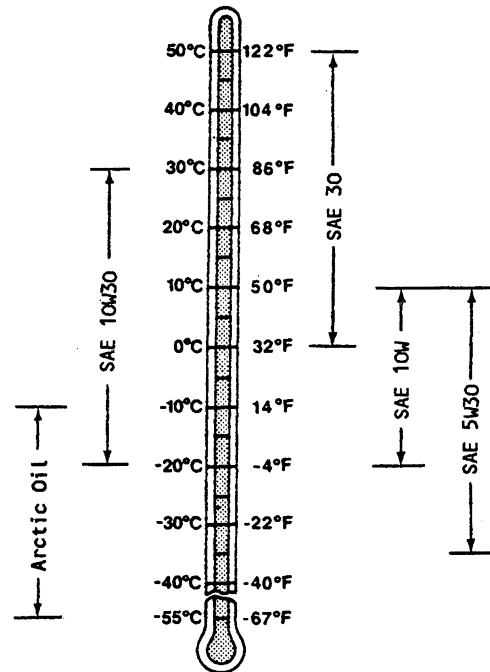
GASOLINE ENGINE OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere PLUS-4® engine oil is recommended.

Other oils may be used if they meet API Service Classification SF or SE.

Oils meeting Military Specification MIL-L-46167A may be used as arctic oils.



TS239 -19-09NOV88

DX,GAS -19-04JUN90

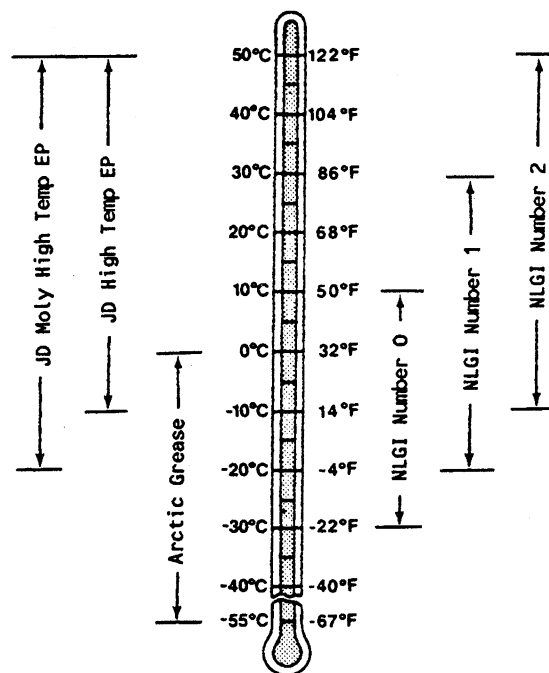
EXTREME PRESSURE GREASE

Use grease based on the expected air temperature range during the service interval.

John Deere Moly High Temperature EP Grease and John Deere High Temperature EP Grease are recommended.

Other greases that may be used are:

- SAE Multipurpose EP Grease with 3 to 5 percent molybdenum disulfide.
- SAE Multipurpose EP Grease.
- Greases meeting Military Specification MIL-G-10924C may be used as arctic grease.



DX,GREA1

-19-04JUN90

TS248 -19-07OCT88

HYDROSTATIC TRANSMISSION OIL

SAE 10W30 engine oil with API classifications of SE, CC, or CD is recommended in the LX176, LX178 and LX186 Tractor transmission.

IMPORTANT: To prevent contamination in hydraulic system, DO NOT drain or change hydrostatic transmission fluid.

MX,FLFM,B

-19-07AUG90

Troubleshooting

ENGINE

Symptom	Problem	Solution
Engine will not start.	Fuel shut-off valve closed.	Open fuel shut-off valve
	Brake not pushed down.	Push down brake.
	PTO switch in ON position.	Put PTO switch in OFF position.
	Spark plug wire loose or disconnected.	Connect spark plug wire.
	Transmission lever out of N position and brake pedal not pushed down.	Put transmission lever in neutral and push down brake pedal.
Engine hard to start.	Carburetor dirty.	See your John Deere dealer.
	Faulty spark plug.	Replace spark plug.
	Loose or corroded electrical connections.	Clean and tighten connections.
	Stale fuel.	Drain and fill fuel tank.
Engine misses under load.	Faulty spark plug.	Replace spark plug.
	Stale fuel.	Drain and fill fuel tank.
Engine vapor locks.	Fuel tank vent plugged.	Clean fuel tank vent.
	Dirt in fuel filter.	See your John Deere dealer.
Engine runs unevenly.	Cooling fins plugged.	Clean engine cooling fins.
	Loose electrical connections.	Tighten electrical connections.
	Choke or throttle cable sticking.	Lubricate cable.
Engine overheats.	Air cleaner element plugged.	Clean or replace element.
	Engine air intake screen plugged.	Clean air intake screen.
	Cooling fins plugged.	Clean cooling fins.
	Engine oil low.	Add oil.
	Engine operated too long at slow idle speed.	Operate engine with throttle lever in FAST position.
	Coolant low—LX 178 Tractor only.	Add coolant.

Continued on next page

Troubleshooting

Symptom	Problem	Solution
Engine will not idle.	Spark plug not gapped correctly.	Check spark plug gap.
	Faulty spark plug.	Replace spark plug.
Engine backfires.	Faulty spark plug.	Replace spark plug. Idle engine 2 minutes before stopping.
Engine knocks.	Stale or low octane fuel.	Drain and refill fuel tank.
	Engine overloaded.	Reduce load on engine.
	Low engine speed.	Run engine at wide open throttle.
Engine loses power.	Engine overheating.	See ENGINE OVERHEATS in this section.
	Too much oil in engine.	Drain oil to correct level.
	Dirty air cleaner.	Clean air cleaner element.
	Faulty spark plug.	Replace spark plug.

MX,TSFM,A -19-07AUG90

TRACTOR

Symptom	Problem	Solution
Tractor vibrates too much.	Attachment drive belts worn or damaged.	Replace belts.
	Dirt on drive sheaves.	Clean sheaves and belts with a damp cloth.
Tractor will not move with engine running.	Parking brake locked.	Unlock parking brake.
	Transmission hydraulic oil level low.	Add oil.
Tractor moves with engine running and hydrostatic control lever in neutral.	Linkage out of adjustment.	See your John Deere dealer.

MX,TSFM,B -19-07AUG90

ELECTRICAL

Symptom	Problem	Solution
Starter does not work or will not turn engine.	Brake pedal not down.	Depress brake pedal.
	Transmission control lever engaged.	Move lever to N position.
	PTO switch in ON position.	Move switch down to OFF position.
	Battery terminals corroded.	Clean battery terminals.
	Battery dead or low charge.	Have your dealer test battery.
Battery will not charge.	Dead cell in battery.	Replace battery.
	Low engine speed or excessive idling.	Always run engine at wide open throttle when mowing.
	Battery cables and terminals dirty.	Clean battery cables and terminals.

MX,TSFM,C -19-07AUG90

MOWER

Symptom	Problem	Solution
Discharge chute plugged.	Belt installed incorrectly.	Change belt installation.
	Grass too wet.	Wait for grass to dry.
	Grass too long.	Raise cutting height and cut grass twice.
	Restricted air flow.	See MOWING AND BAGGING TIPS in Operating the Mower section.
	Engine rpm too low.	Mow at full throttle.
	Travel speed too fast.	Slow down.
Patches of grass uncut.	Travel speed too fast.	Slow down.
	Engine rpm too low.	Mow at full throttle.
Belt slipping.	Debris in sheaves.	Clean sheaves.
	Worn belt.	Replace belt.
Too much vibration.	Debris on mower deck or in sheaves.	Clean mower deck and sheaves.
	Damaged drive belt.	Replace drive belt.
	Damaged sheaves or sheaves out of alignment.	Replace sheaves. See your John Deere dealer.
	Blades out of balance.	Have blades balanced.
Blades scalping grass.	Cutting too low.	Raise cutting height.
	Turning speed too fast.	Reduce speed on turns.
	Ridges in terrain.	Change mowing pattern.
	Rough or uneven terrain.	Adjust mower wheels.
	Mower wheels not adjusted correctly.	Adjust mower wheels.
	Low tire pressure.	Add air to tire.
	Bent blade(s).	Replace blade(s).
	Mower not level.	Level mower.
Uneven cut.		

Continued on next page

Troubleshooting

Symptom	Problem	Solution
Mower loads down tractor.	Travel speed too fast.	Slow down.
	Blades dull.	Have blades sharpened.
	Mower wheels not adjusted correctly.	Adjust mower wheels.
	Tire pressure.	Check tire pressure.
	Engine rpm too low.	Mow at full throttle.
Grass tips are jagged and turn grayish brown after mowing.	Travel speed too fast.	Slow down.
	Debris wrapped around mower spindles.	Clean mower.
	Bagging blades on mower.	Install regular blades.
	Dull mower blades.	Sharpen blades.

MX,TSFM,D -19-07AUG90

Service

PERIODIC SERVICE

BREAK-IN (after first 5 hours of operation)

- Change engine oil
- Change engine oil filter.
- Check for loose hardware.

BEFORE EACH USE

- Check engine oil level.
- Clean air intake screens.

25-HOURS

- Check tire pressure.
- Check and clean precleaner and air cleaner element.
- Check battery electrolyte level.
- Check hydrostatic transmission oil level on LX176, LX178 and LX186 Tractors.
- Check safety systems.
- Check LX178 Tractor coolant level.

50-HOURS

- Lubricate mower blade spindles.
- Lubricate tractor front wheel spindles.
- Lubricate 48-inch mower rear wheels.

100-HOURS

IMPORTANT: When you operate tractor in extremely dusty or dirty conditions, change engine oil and filter every 25 hours.

- Change engine oil and filter.
- Check spark plug(s).
- Clean battery.

NOTE: Change engine oil and filter every 100 hours or yearly, whichever is less.

AS NECESSARY

- Change indicator light bulb.
- Change fuel filter.

EVERY 2 YEARS

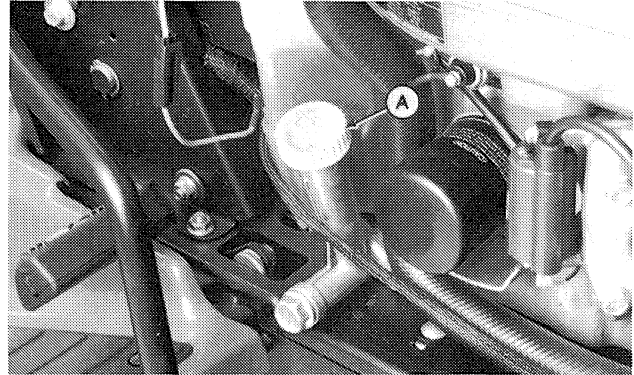
- Change coolant on LX178 Tractor.

MX,SEFM,A -19-07AUG90

CHECKING ENGINE OIL LEVEL

NOTE: Check oil twice a day if you run engine over 4 hours in a day.

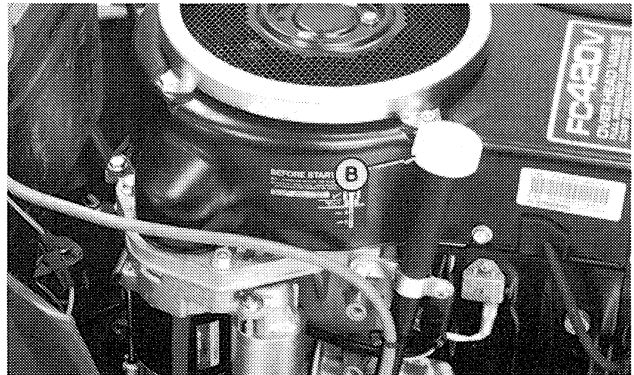
1. Park tractor on a level surface.
2. Stop engine.
3. Check engine oil when engine is cold.
4. Lift hood.



M72223 -UN-24JUL90

NOTE: Engine must not be running.

5. Clean around dipstick. Remove dipstick (B) on LX172, LX176 and LX186 Tractor or dipstick (A) on LX178 Tractor. Wipe dipstick off with a clean cloth.
6. Install dipstick in tube, but DO NOT tighten it. Let dipstick threads rest on top of tube.
7. Remove dipstick. Check oil level on dipstick.
8. Oil must be between ADD and FULL marks.



M72179 -UN-30JUL90

IMPORTANT: If oil level is below ADD mark, DO NOT run the engine.

9. If oil level is low, add oil to bring oil level no higher than FULL mark on dipstick. (See ENGINE OIL in Fuels and Lubricants section for correct oil.)
10. Install and tighten dipstick. Lower hood.

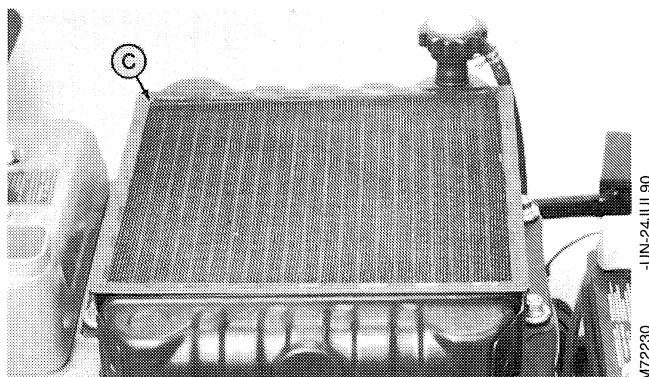
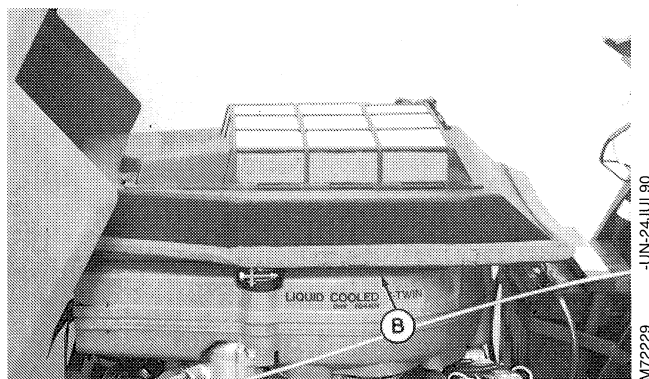
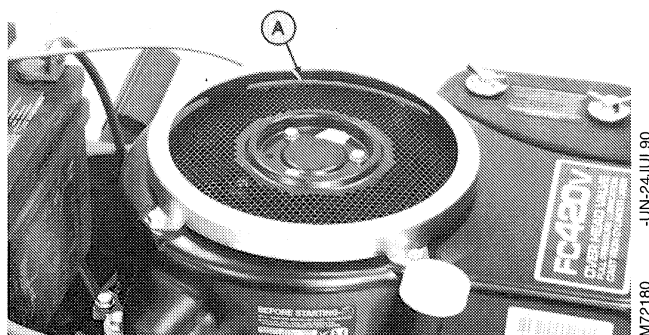
MX,SEFM,B -19-07AUG90

CLEANING AIR INTAKE SCREEN

1. Stop engine and remove ignition key.
2. Lift hood.
3. Clean air intake screen (A) on LX172, LX176, and LX186 Tractor or air intake screen (B) on LX178 Tractor.
4. On LX178 Tractor, remove air intake screen (B). Clean radiator screen (C) when operating in extremely dirty conditions.
5. Install radiator screen and air intake screen on LX178 Tractor.

A—Air Intake
Screen—LX172,
LX176, & LX186
B—Air Intake
Screen—LX186

C—Radiator
Screen—LX178



MX,SEFM,C -19-07AUG90

CHECKING TIRE PRESSURE EVERY 25-HOURS

NOTE: If tractor is equipped with a snowthrower, inflate front tires 16 psi (110 kPa).

Check tires for damage.

Check tire pressure with an accurate gauge.

Level mower after you check tire pressure. (See ADJUSTING MOWER LEVEL in Operating the Mower section.)

TIRE PRESSURE SPECIFICATION

Tire Size	Pressure
Front:	
15 x 6.00-6	10—16 psi (70—110 kPa)
Rear:	
20 x 10.00-8	6—10 psi (40—70 kPa)

MX,SEFM,D -19-07AUG90

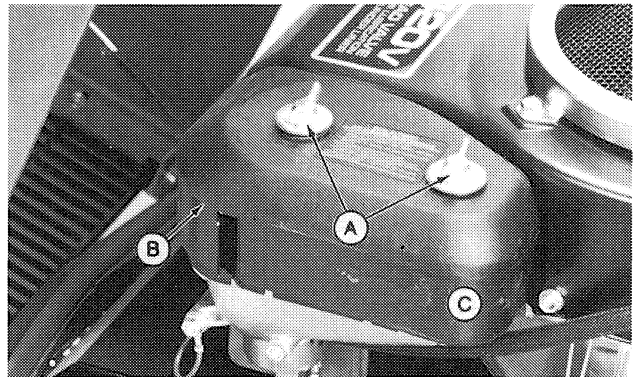
CHECKING AND CLEANING PRECLEANER AND AIR CLEANER ELEMENT

NOTE: If you operate tractor in dusty conditions, clean or replace element more often.

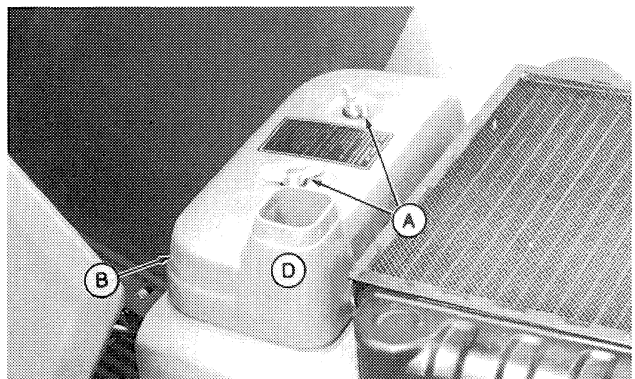
1. Lift hood.

NOTE: Remove air intake screen on LX178 Tractor. (See CLEANING AIR INTAKE SCREEN in this section.)

2. Remove two thumb screws (A) to remove cover (B) on LX172, LX176, and LX186 Tractor air cleaner (C) or LX178 Tractor air cleaner (D).



M72184 -UN-24JUL90



M72231 -UN-24JUL90

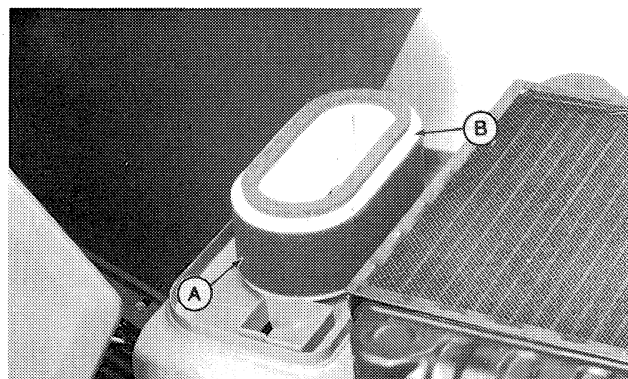
MX,SEFM,E -19-07AUG90

NOTE: LX178 Tractor illustrated.

3. CHECK: If precleaner (A) is dirty, remove it from paper element (B).

4. CHECK: If paper element is dirty, tap it gently on your hand to remove dust. If element is very dirty, install a new element.

NOTE: If precleaner or paper element has a break or is damaged, replace it.



MX,SEFM,F -19-07AUG90

M72232 -UN-24JUL90

5. If precleaner is dirty, wash it in a solution of warm water and liquid detergent. DO NOT wash paper element.

6. Rinse precleaner.

7. Squeeze excess water from precleaner.

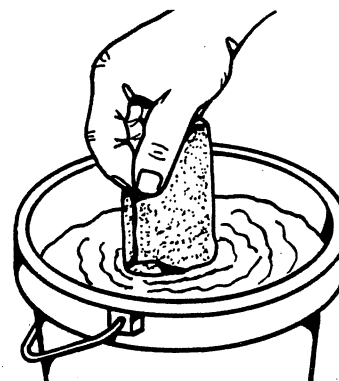
8. Allow precleaner to air dry.

9. Put approximately 1 oz (30 ml) of clean engine oil on precleaner. Squeeze precleaner to distribute oil evenly.

10. Install precleaner on paper element.

11. Install element.

12. Install cover. Lower hood.



MX,SEFM,G -19-07AUG90

M72233 -UN-24JUL90

CAUTION: Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

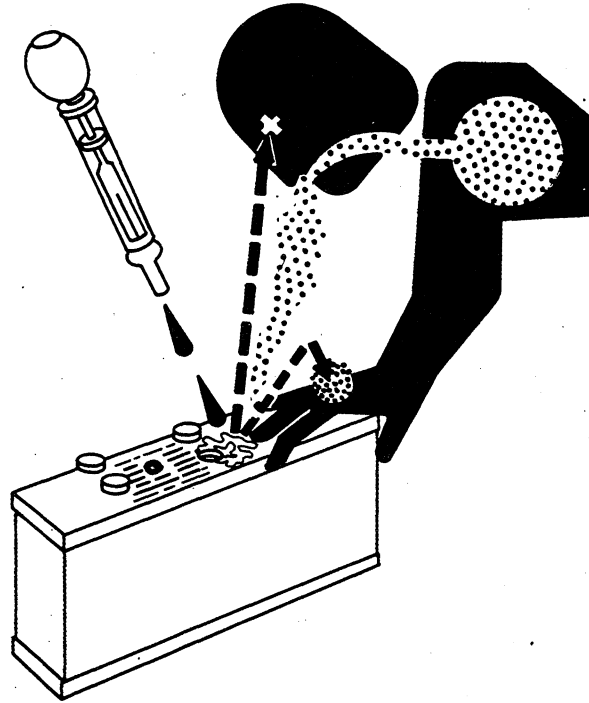
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10—15 minutes. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.



TS203 -UN-23AUG88

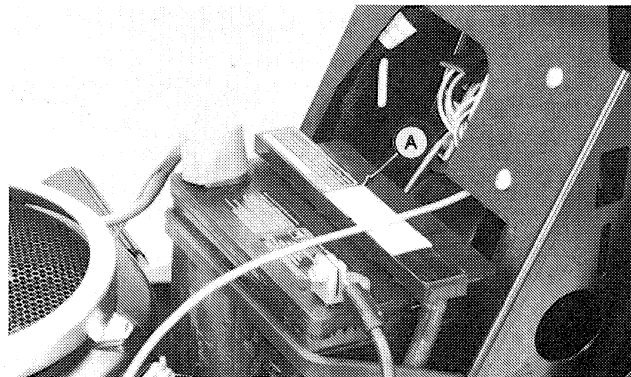
DX,ACID1 -19-26JAN90

CHECKING BATTERY ELECTROLYTE LEVEL

CAUTION: Keep sparks and flames away from battery. DO NOT smoke when checking electrolyte level.

1. Lift hood.
2. Remove battery manifold cap (A).

NOTE: LX172 Tractor illustrated.



M72177 -UN-24JUL90

MX,SEFM,H -19-07AUG90

IMPORTANT: DO NOT fill cells to the bottom of the filler neck. Electrolyte can overflow when battery is charged and cause damage.

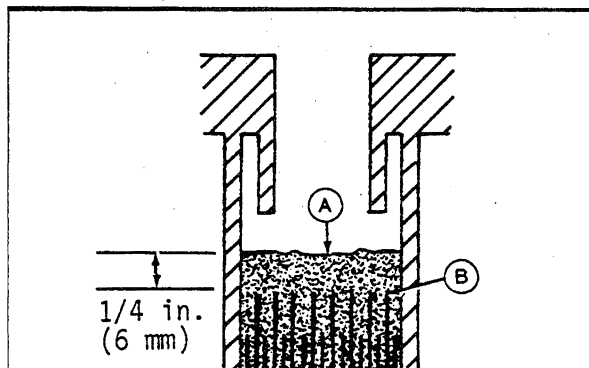
3. Electrolyte (A) should be 1/4 in. (6 mm) above plates (B).

4. If necessary, add distilled water.

IMPORTANT: Be sure battery overflow drain hose is attached to manifold cap.

5. Install manifold cap.

6. Lower hood.



MX,SEFM,I -19-07AUG90

M39771 -UN-09SEP88

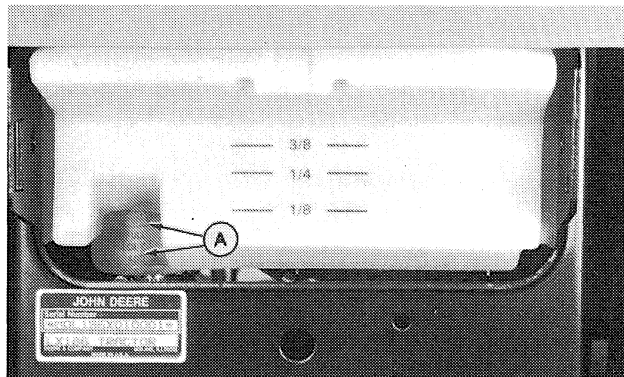
CHECKING HYDROSTATIC TRANSMISSION OIL LEVEL (LX176, LX178 AND LX186 TRACTORS)

1. Park tractor on level surface. Stop engine.
2. Check transmission oil level before operating tractor when transmission oil is cold.
3. Oil must be between top mark and bottom mark (A) on reservoir.

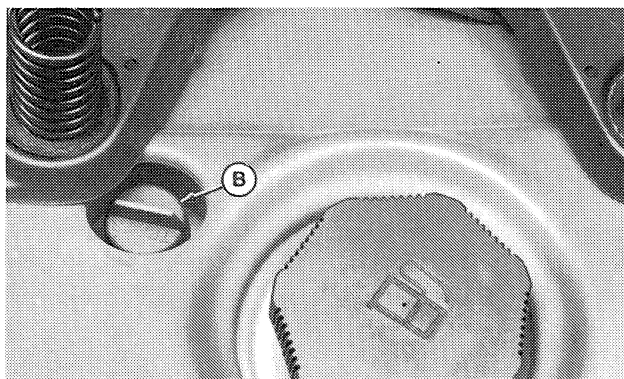
IMPORTANT: Before removing fill cap and foam filter, clean around reservoir filler neck to prevent dirt from entering reservoir and causing transmission damage.

4. If oil level is low, tip seat up and loosen two seat adjusting knobs under seat. Slide seat forward for access to fill cap (B). Remove fill cap and foam filter and add enough oil to bring oil level to top mark. (See Fuels and Lubricants section for correct oil.)

5. Install foam filter and tighten fill cap.
6. Start engine.
7. Operate tractor forward and in reverse several times.
8. Park tractor on level surface. Stop engine.
9. Check oil level again.



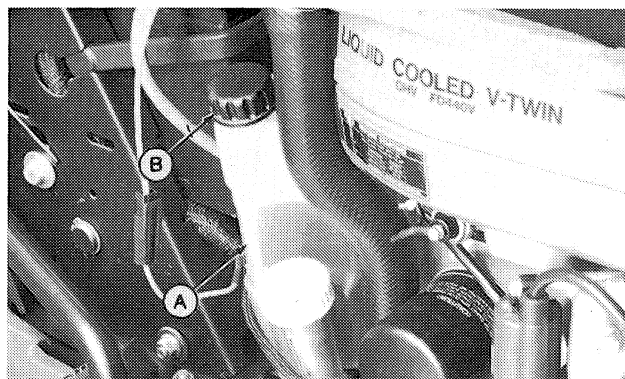
M72234 -UN-24JUL90



M72261 -UN-30JUL90

CHECKING COOLANT LEVEL—LX178 TRACTOR

1. Lift hood.
2. Observe coolant in recovery tank (A). Coolant level should be up to H mark on recovery tank when engine is hot or to L mark when engine is cold.
3. Remove cap (B) to add coolant.
4. If coolant is low, add ethylene glycol (without stop-leak additive) antifreeze and water in the ratio specified on the antifreeze container.
5. Install and tighten recovery tank cap.
6. Clean debris from air intake screens and radiator.
7. Check condition of hoses.



-JUN-24-JUL-90
M72244

MX,SEFM,K -19-07AUG90

TESTING SAFETY START SYSTEMS

CAUTION: If tractor does not pass a test, do not operate tractor. See your John Deere dealer.

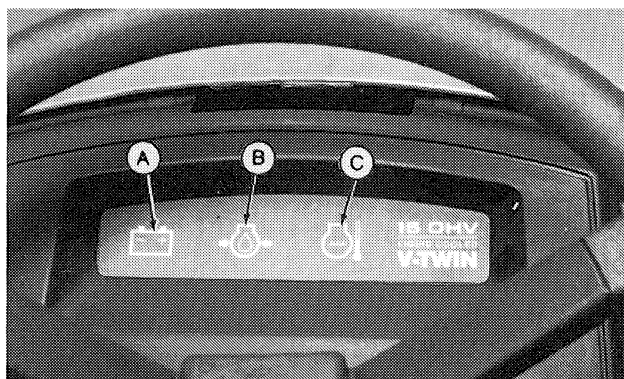
1. Check operation of indicator lights.

Turn key to RUN position.

LOOK: Indicator lights (A) and (B) must light on tractors so equipped. Coolant temperature indicator light (C) on LX178 Tractor will only come on when engine is cranked or overheated and must go out after 5 seconds when engine starts.

If one indicator does not light, see REPLACING INDICATOR LIGHT BULB in this section.

If new indicator bulb does not light or no indicators work, see your John Deere dealer.



-JUN-24-JUL-90
M72222

A—Battery Discharge
B—Engine Oil Pressure
(LX178 and LX186 Tractors)

C—Coolant Temperature Indicator (LX178 Tractor)

MX,SEFM,L -19-07AUG90

FIRST TEST

1. Hydrostatic transmission equipped tractors: unlock park brake. Gear drive transmission equipped tractors: push clutch pedal down all the way.

2. Move gear drive transmission equipped tractors shift lever or hydrostatic transmission equipped tractors ground travel pedals out of N (neutral) position.

3. Turn key to START position.

4. Engine must not crank.

MX,SEFM,M -19-07AUG90

SECOND TEST

1. Put transmission shift lever or release ground travel pedals to N (neutral) position.

2. Put PTO switch lever in ON position.

4. Turn key to START position.

5. Engine must not crank.

MX,SEFM,N -19-07AUG90

THIRD TEST

1. Start engine. Run engine at one-third throttle position.

2. Put PTO switch lever in ON position.

3. Stand up. Do not get off tractor.

4. Engine should begin to die. PTO should immediately shut off and mower blades should stop.

MX,SEFM,O -19-07AUG90

**FOURTH TEST (HYDROSTATIC DRIVE
TRACTORS ONLY)**

1. Start engine.
2. Unlock brake.
3. Stand up. Do not get off tractor.
4. Engine should begin to stop.

MX,SEFM,P -19-07AUG90

CHANGING ENGINE OIL ON LX172, LX176 AND LX186 TRACTORS

NOTE: Change engine oil and filter after the first 5 hours of break-in operation. Then, see **SERVICE INTERVALS** in this section for regular service hours to change oil.

1. Run engine to warm the oil.
2. Park tractor on level surface.
3. Stop engine and remove ignition key.
4. Remove drain plug (A) to drain oil.
5. Remove dipstick (B).

NOTE: Place a small shallow pan or funnel under oil filter to catch oil drained from filter.

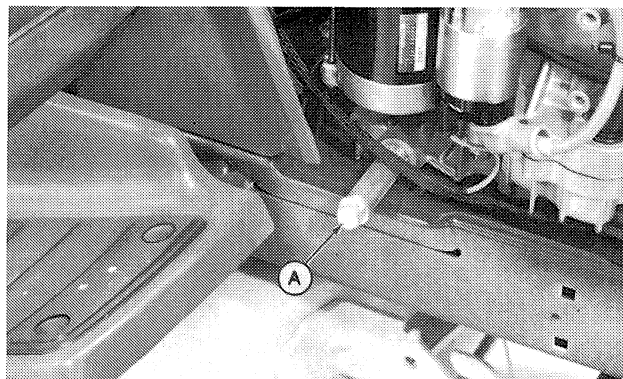
6. Remove oil filter (C). Turn filter counterclockwise to remove.

7. Apply a film of clean engine oil on seal of new filter. Install filter. Turn filter until seal contacts mounting surface. Then turn filter BY HAND 1/2 turn more.

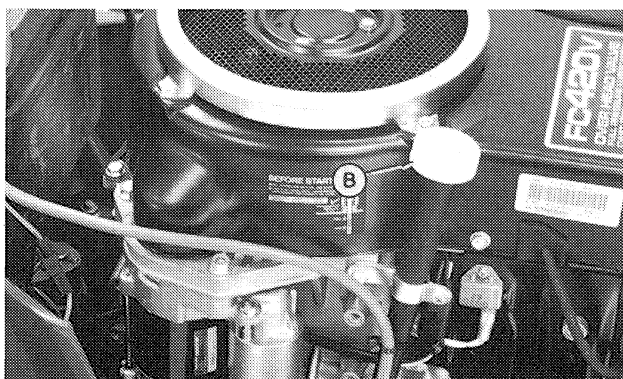
8. Install drain plug.
9. Add oil specified in Fuels and Lubricants section.

NOTE: The LX172 and LX176 Tractor engine oil capacity is 3.6 pt (1.7 L). The LX186 Tractor engine oil capacity is 4.2 pt (2.0 L).

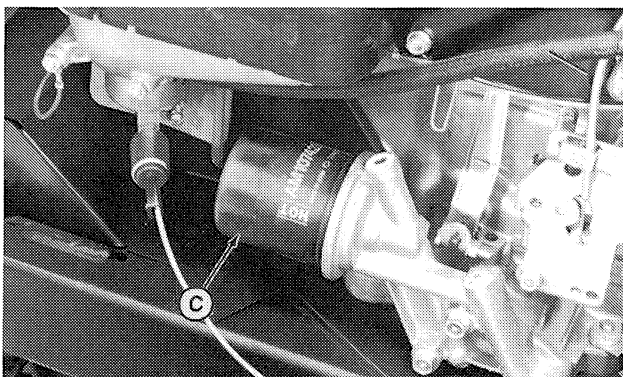
10. Install and tighten dipstick.
11. Start engine.
12. Run engine at slow speed 2 minutes. Check for leaks around filter.
13. Stop engine and wait a couple of minutes. Remove dipstick. Check oil level. Add oil only to FULL mark on dipstick.
14. Install and tighten dipstick. Lower hood.



M72178 -UN-24JUL90



M72179 -UN-30JUL90



M72176 -UN-24JUL90

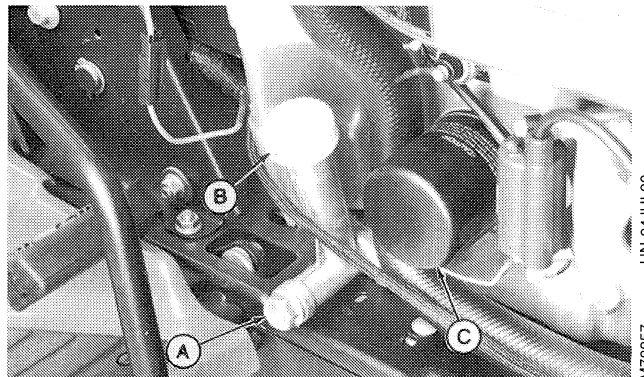
CHANGING ENGINE OIL ON LX178 TRACTORS

NOTE: Change engine oil and filter after the first 5 hours of break-in operation. Then, see SERVICE INTERVALS in this section for regular service hours to change oil. Oil capacity is 3.2 pt (5 L).

1. Run engine to warm the oil.
2. Park tractor on level surface.
3. Stop engine and remove ignition key.
4. Remove drain plug (A) to drain oil.
5. Remove dipstick (B).

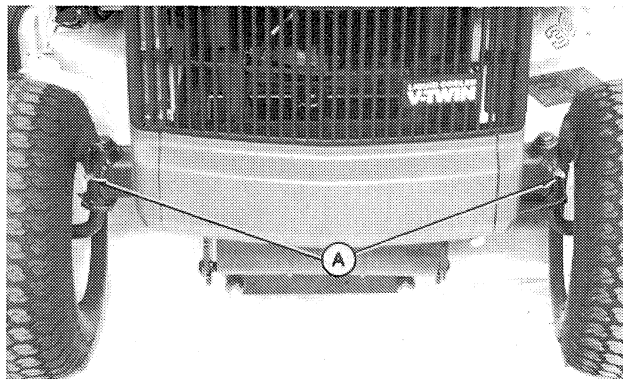
NOTE: Place a small shallow pan or funnel under oil filter to catch oil drained from filter.

6. Remove oil filter (C). Turn filter counterclockwise to remove.
7. Apply a film of clean engine oil on seal of new filter.
8. Install filter. Turn filter until seal contacts mounting surface. Then turn filter BY HAND 1/2 turn more.
9. Install drain plug.
10. Add oil specified in Fuels and Lubricants section. Oil capacity is 3.2 pt (1.5 L).
11. Install and tighten dipstick.
12. Start engine. Run engine at slow speed 2 minutes. Check for leaks around filter.
13. Stop engine and wait a couple of minutes. Check oil level. Add oil only to FULL mark on dipstick.
14. Install and tighten dipstick. Lower hood.

-JUN-24/JUL90
MT2257

LUBRICATING WHEEL SPINDLES

1. Jack up front of tractor so grease can get around spindles.
2. Lubricate each spindle (A) with one to two shots of John Deere Multi-Purpose Grease or an equivalent. Turn wheels to distribute grease on spindles.

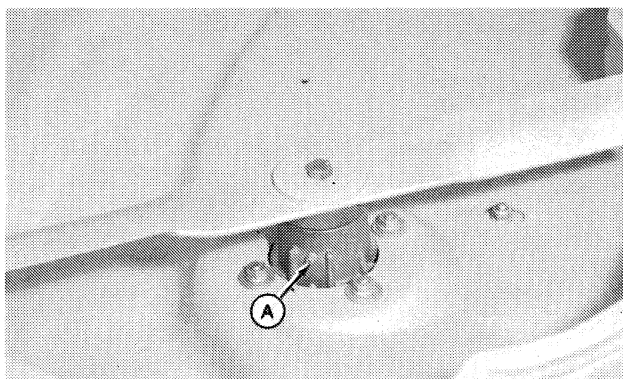


MX,SEFM,S -19-07AUG90

M72235 -UN-24JUL90

LUBRICATING 38-INCH MOWER BLADE SPINDLES

Lubricate two spindles (A) with one or two shots of John Deere Multi-Purpose Grease or equivalent.

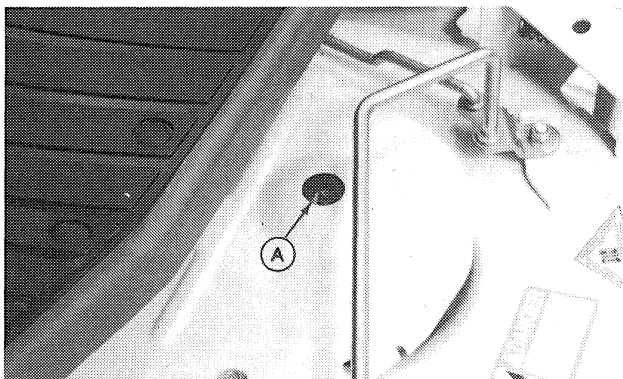


MX,SEFM,T -19-07AUG90

M39926 -UN-29AUG88

LUBRICATING 48-INCH MOWER BLADE SPINDLES

Lubricate three spindles (A) with one or two shots of Multi-Purpose Grease or equivalent.



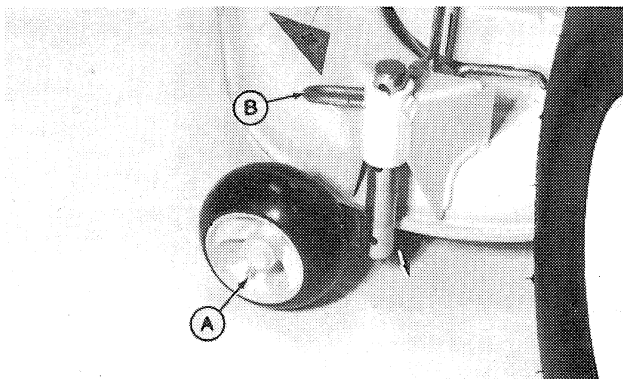
MX,SEFM,U -19-07AUG90

M72258 -UN-24JUL90

LUBRICATING 48-INCH MOWER REAR WHEELS

NOTE: Pull out on J-pin (B) and pivot left-hand mower wheel for access to fitting.

Lubricate grease fitting (A) on each rear mower wheel with one or two shots of Multi-Purpose Grease or equivalent.



MX,SEFM,U1 -19-07AUG90

M72236 -UN-24JUL90

CHECKING SPARK PLUG

CAUTION: Before you remove spark plug:
Stop engine.
Wait until engine is cool.

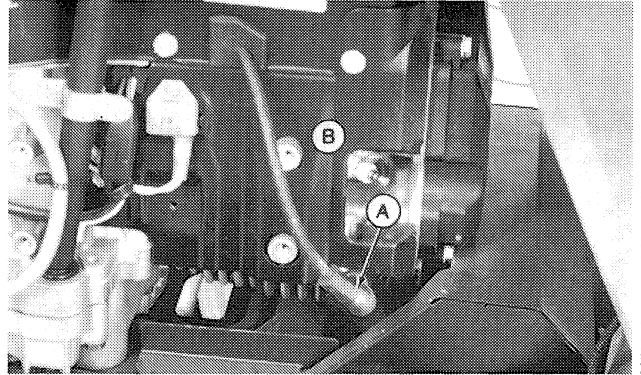
1. Lift hood.
2. Disconnect spark plug wire (A) on LX172, LX176 and LX186 Tractor engine (B) or LX178 Tractor engine (C).

NOTE: LX178 Tractor has two spark plugs (one each side of engine).

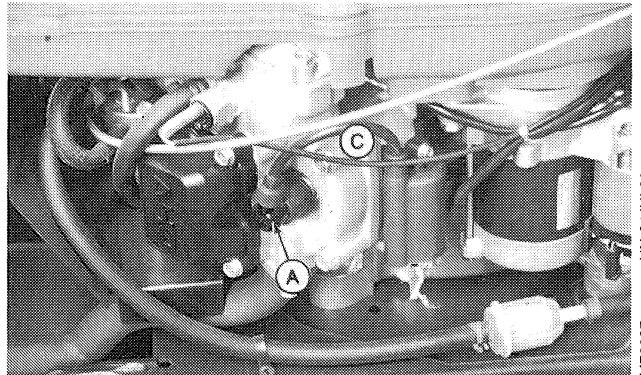
3. Remove spark plug.
4. Clean spark plug carefully with a wire brush.
5. Inspect spark plug for:
 - Cracked porcelain.
 - Pitted or damaged electrodes.
 - Other wear or damage.

NOTE: In Canada, replace spark plug with resistor plug only.

6. Replace spark plug as necessary.



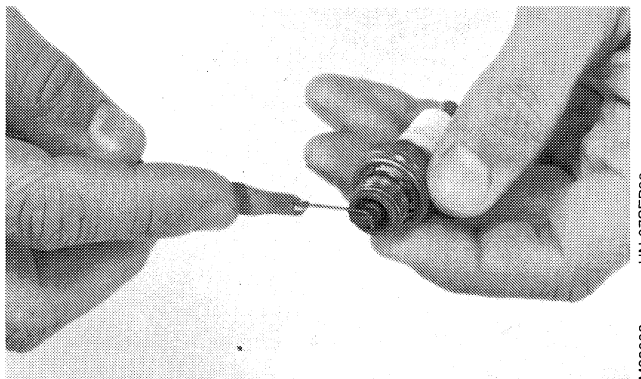
M72213 -UN-24JUL90



M72237 -UN-24JUL90

MX,SEFM,V -19-07AUG90

7. Check plug gap with a wire feeler gauge.
8. Gap must be 0.028 in. (0.7 mm).
9. To change gap, move the outer electrode.
10. Install and tighten spark plug. If you have a torque wrench, tighten plug to 15 lb-ft (20 N·m).
11. Connect spark plug wire.
12. Lower hood.



M33906 -UN-07SEP88

MX,SEFM,W -19-07AUG90

CLEANING OR REPLACING BATTERY

⚠ CAUTION: Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace it last.



MX,SEFM,X -19-07AUG90

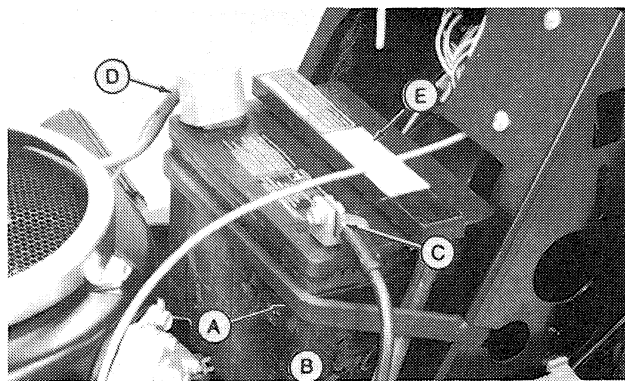
TS204 -UN-23AUG88

NOTE: LX176 Tractor illustrated.

1. Remove rubber hold-down strap (A) to remove battery (B).
2. Remove negative (black) cable (C) from battery first.
3. Remove positive (red) cable (D).
4. If battery is very dirty, remove battery.
5. Clean battery, battery terminals, cable ends, battery box, and other parts with a solution of 1 part baking soda to 4 parts water. KEEP solution out of battery cells.
6. Rinse all parts with clean water. Let dry.
7. Install battery.

IMPORTANT: Be sure overflow hose is attached to manifold cap.

8. Check overflow hose attached to manifold cap (E) to be sure it is open.
9. Connect positive (red) cable to battery first, then negative (black) cable.
10. Apply petroleum jelly on battery terminals to help prevent corrosion. Slip rubber cover over positive terminal.
11. Install rubber hold-down strap.



M72182 -JUN-24-JUL90

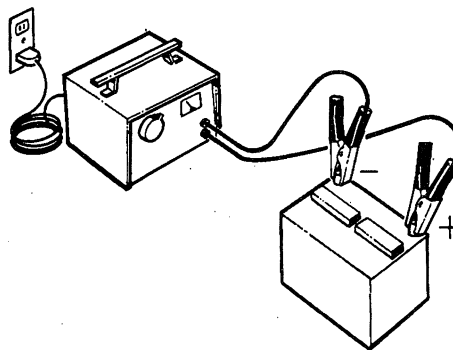
CHARGING BATTERY

CAUTION: Do not charge a frozen battery. Battery gas can explode. Keep cigarettes, sparks, and flames away from battery. Remove cell caps before charging.

1. Remove and clean battery. (See CHECKING AND CLEANING BATTERY in this section.)
2. Check electrolyte level. (See CHECKING BATTERY ELECTROLYTE LEVEL in Service section.)

CAUTION: Before you connect or disconnect charger cables to battery, unplug charger cord.

3. Connect positive (+) charge cable to positive (+) battery terminal.
4. Connect negative (—) charge cable to negative (—) battery terminal.
5. Plug in charger cord.
6. If battery needs complete charging, charge at 3 amps constantly for 6 to 12 hours or 5 amps for 3 to 16 hours using an automatic charger.
7. Unplug charger cord. Remove charger cables.
8. Install battery.



-JUN-01SEP88

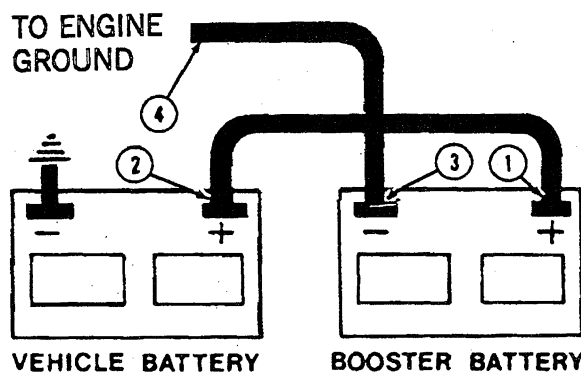
M61341

MX,SEFM,Z -19-07AUG90

USING BOOSTER BATTERY

CAUTION: Battery gas is explosive:
 —DO NOT smoke while you charge battery.
 Keep all flames and sparks away.
 —DO NOT charge a frozen battery.
 —DO NOT connect booster battery negative (-) cable to starting vehicle negative (-) terminal.

Connect cables in order shown. Connect booster negative (-) cable to engine ground away from battery last.



-19-13MAR89

M61049

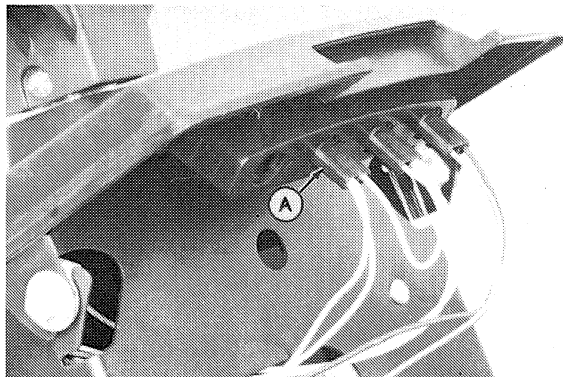
MX,SEFM,AA -19-07AUG90

REPLACING INDICATOR LIGHT BULB

NOTE: LX178 Tractor illustrated.

IMPORTANT: If more than one bulb is defective, replace only one bulb at a time to be sure light socket is installed back in correct receptacle.

1. Lift hood.
2. Turn indicator bulb socket (A) 1/8 turn counterclockwise to remove it.
3. Pull bulb from socket.
4. Push new bulb into socket. Install socket.
6. Lower hood.



MX,SEFM,AB -19-07AUG90

M72238 -UN-24JUL90

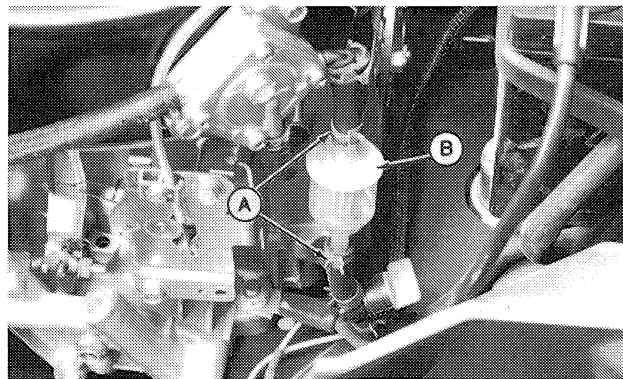
REPLACING FUEL FILTER

CAUTION: Keep cigarettes, sparks, and flames away from fuel system. Make sure engine is cool to touch.

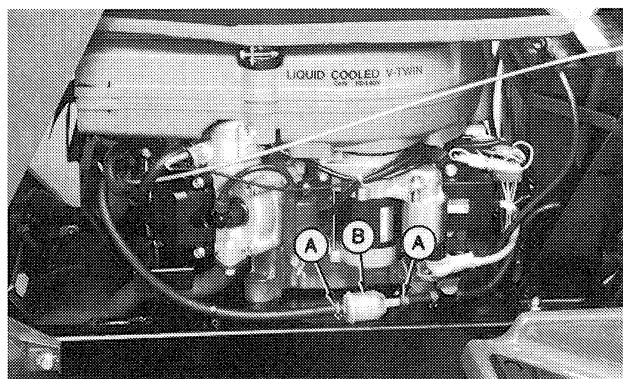
1. Park tractor on level surface. Lift hood.
2. Close fuel shut-off valve.
3. Let engine cool. Lift hood.

NOTE: Top illustration is fuel filter on LX172, LX176 and LX186 Tractor. Bottom illustration is LX178 Tractor.

4. Slide hose clamps (A) away from filter (B).
5. Disconnect hoses from filter.
6. Connect hoses to new filter.
7. Install clamps.
8. Open fuel shut-off valve.
9. Lower hood.



-UN-24/JUL90
M72208

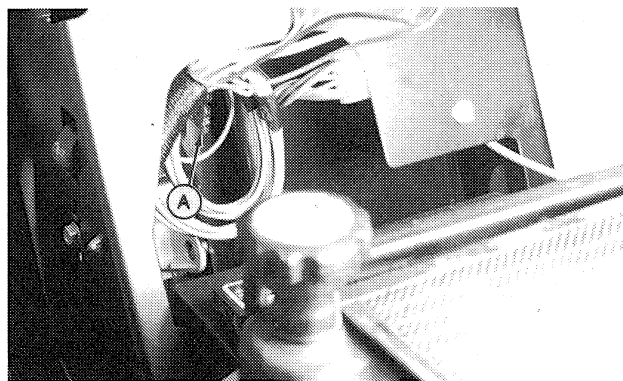


-UN-24/JUL90
M72240

MX,SEFM,AC -19-07AUG90

REPLACING FUSES

1. Raise hood.
2. Pull defective fuse (A) out of socket. A metal clip in the fuse will be broken.
3. Push new fuse into socket. Make sure to replace fuse of proper amperage. (See your John Deere dealer or an automotive parts store for fuse replacement.)

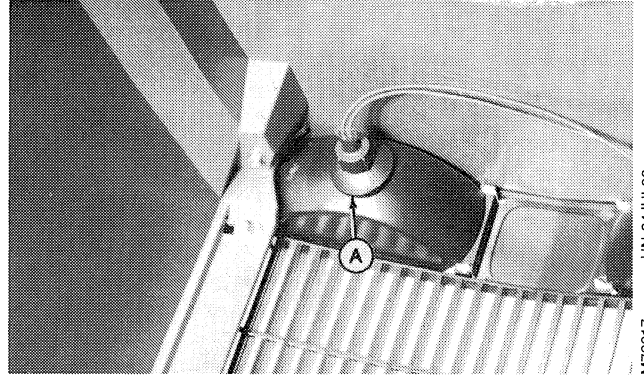


-UN-24/JUL90
M72241

MX,SEFM,AD -19-07AUG90

REPLACING HEADLIGHT BULB

1. Raise hood.
2. Turn bulb socket (A) 1/4 turn counterclockwise to remove.
3. Push in and turn bulb 1/4 turn counterclockwise out of socket. Replace defective bulb with a new GE1156 bulb.
4. Insert bulb socket into housing, push in and turn 1/4 turn clockwise to install.

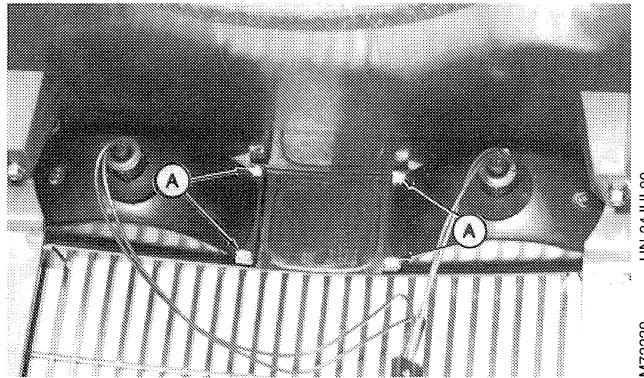


MT2217 -JUN-24JUL90

MX,SEFM,AE -19-07AUG90

CLEANING HEADLIGHT LENS

1. Open hood.
2. Squeeze plastic clips (A) together to remove each lens.
3. Clean lens with a soft cloth and a household window cleaner.
4. Reinstall lens by pushing lightly on front surface of lens until clips snap in place.



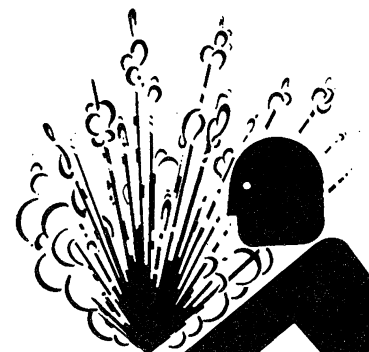
MT2239 -JUN-24JUL90

MX,SEFM,AE1 -19-07AUG90



CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.



TS281 -JUN-23AUG88

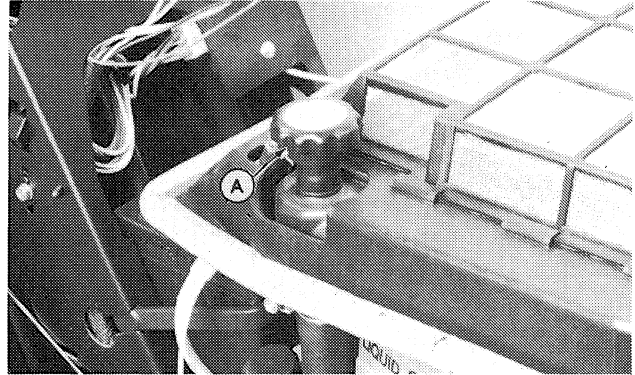
DX,RCAP1 -19-26JAN90

DRAINING COOLING SYSTEM—LX178 TRACTOR

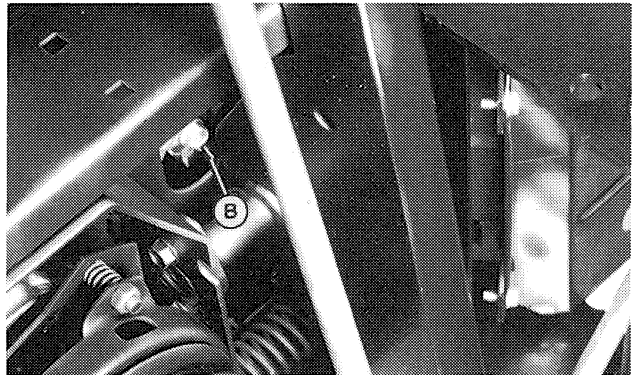
1. Stop the engine. Let engine cool.
2. Lift hood.

CAUTION: Do not remove radiator cap unless engine is cool. Then turn the cap slowly to the stop. Release all pressure before you remove the cap. Antifreeze is poisonous to animals and people. Dispose of antifreeze in a proper container.

3. Slowly remove radiator cap (A).
4. Remove drain plug (B) under tractor to drain all coolant from radiator and engine into a pan or suitable container.
5. After all coolant has drained, install drain plug. Tighten drain plug.



M72242 -UN-24JUL90



M72243 -UN-24JUL90

MX,SEFM,AF -19-07AUG90


FLUSHING COOLING SYSTEM—LX178 TRACTOR

IMPORTANT: Do not pour water into a hot engine or you may damage the cylinder head or block. Do not operate the engine without coolant.

1. Fill the cooling system with clean water and John Deere Cooling System Cleaner, or John Deere Cooling System Quick Flush or an equivalent. Follow directions on the can.

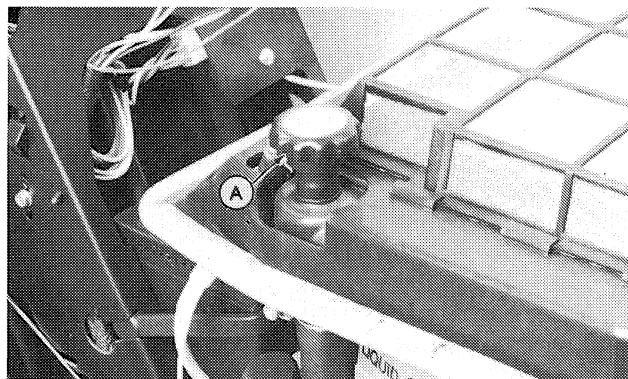
2. Install and tighten radiator cap (A).

3. Start and run engine until it reaches operating temperature.

 **CAUTION:** Engine and coolant will be hot. Turn radiator cap using a thick rag or glove to protect your hand.

4. Drain the cooling system immediately into a pan or proper container before rust and dirt settle.

5. Install and tighten drain plug.



M72242 JUN-24JUL90

MX,SEFM,AG -19-07AUG90

FILLING COOLING SYSTEM—LX178 TRACTOR

IMPORTANT: Low silicate antifreeze is recommended. Use John Deere low silicate antifreeze or equivalent in the cooling system. Do NOT fill cooling system with pure antifreeze.

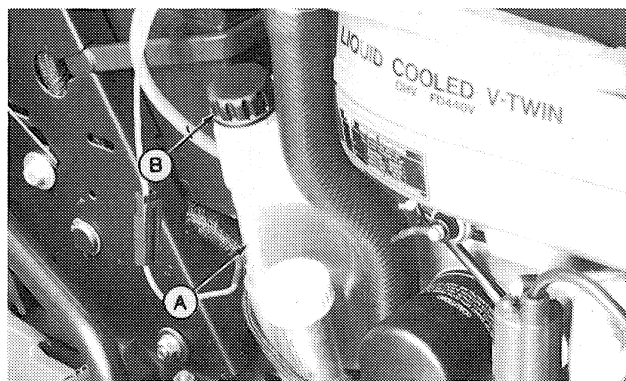
1. Fill the cooling system. Capacity is 2.8 qt (2.6 L). For cold weather, use a solution of only ethylene glycol antifreeze (without a stop-leak additive) and clean, soft water. A chart on the antifreeze container tells how much antifreeze to use for the freeze protection needed in your area. (If you operate your engine in extremely cold temperatures, see your John Deere dealer for information on arctic operation.)

For temperatures above freezing, fill the cooling system with clean, soft water and John Deere Engine Coolant Conditioner.

John Deere Cooling System Sealer or its equivalent may be added to the radiator to seal leaks. Do not use any other additives in the cooling system.

MX,SEFM,AH -19-07AUG90

2. Install and tighten radiator cap.
3. Run engine until it reaches operating temperature.
4. Stop the engine. After engine cools, check coolant level in recovery tank (A). Level should be up to H mark on tank when engine is hot or L mark on tank when engine is cold. Remove cap (B) to add coolant if necessary.
5. Check condition of coolant system hoses. Install new hoses periodically. Tighten hose clamps regularly.



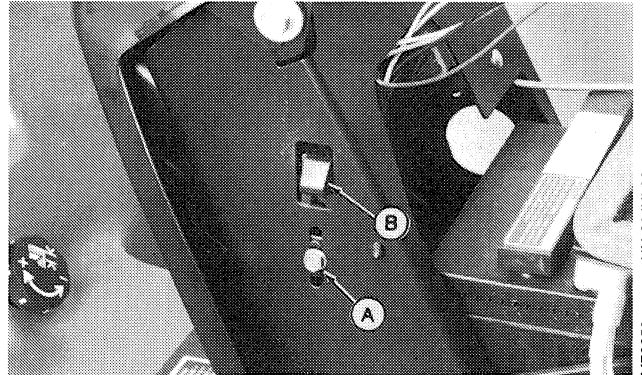
M72244 -UN-24/JUL90

MX,SEFM,AI -19-07AUG90

ADJUSTING HOOD LATCH

NOTE: Hood should stay latched down when latches are properly adjusted.

1. Open hood and loosen cap screw (A) to adjust hood latch (B) on both sides of tractor.
2. Move latch up or down and tighten cap screw for proper adjustment.



MX,SEFM,AI1 -19-07AUG90

-UN-26JUL90
M72259

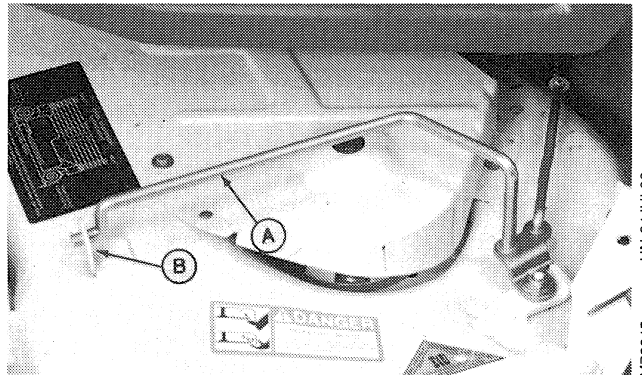
CLEANING OR REPLACING MOWER DRIVE BELT

CAUTION: STOP engine. Remove key. Wait for all moving parts to STOP.

1. STOP engine. LOCK park brake. Remove key.
2. Lower mower to ground.

CAUTION: Spring loaded lever. Release slowly.

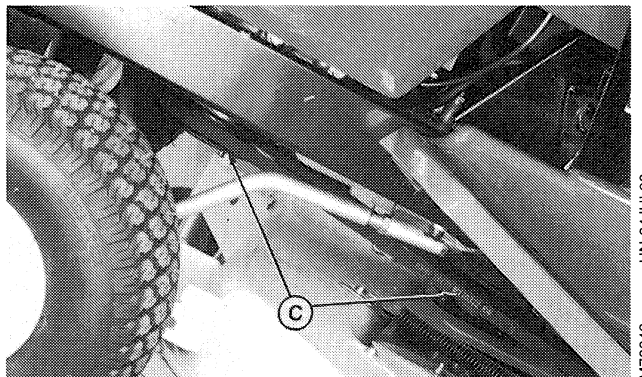
3. The 48-inch mower is illustrated. Procedure is the same for 38-inch mower. To release belt tension, disconnect belt tension lever (A) from hook bracket (B) and move lever all the way out toward you as far as it will go.



MX,SEFM,AJ -19-07AUG90

-UN-24JUL90
M72245

4. Remove drive belt (C) from engine drive sheave and mower sheave.
5. Clean belt with a clean cloth. DO NOT use parts cleaning solvents or belt dressing. They soften belt and shorten belt life.
6. Inspect belt for wear or damage; replace as necessary.
7. Install belt on mower sheave and engine sheave.
8. Move belt tension lever in and connect to hook bracket to tighten belt.



MX,SEFM,AK -19-07AUG90

-UN-24JUL90
M72246

CLEANING OR REPLACING MOWER DECK BELT (38-INCH MOWER)

1. Remove mower deck. (See REMOVING MOWER DECK in this section.)

2. Remove belt guard cover (A).

CAUTION: When disconnecting idler spring:
 •Use locking pliers.
 •Wear eye protection.

3. Disconnect idler spring (B).

4. Remove mower belt (C).

5. Clean and inspect belt for damage. DO NOT clean belt using parts cleaning solvent or belt dressing. They soften belt and shorten belt life.

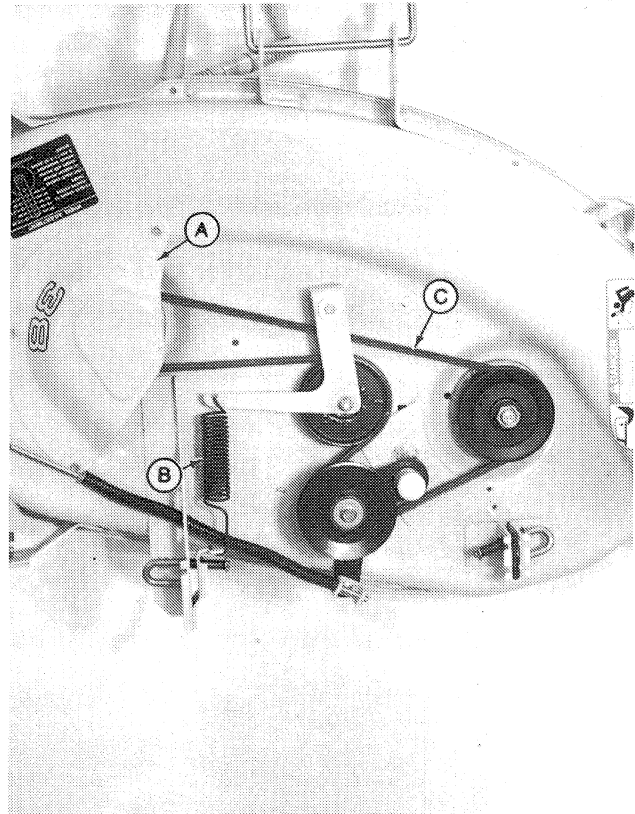
6. Clean upper mower deck and sheaves.

7. Install mower belt.

8. Connect idler spring.

9. Install belt guard cover.

10. Install mower. (See INSTALLING MOWER DECK this section.)



M72247 -UN-24JUL90

MX,SEFM,AL -19-07AUG90

CLEANING OR REPLACING MOWER DECK BELT (48-INCH MOWER)

1. Remove mower deck. (See REMOVING MOWER DECK in this section.)

2. Remove belt guard covers (B) by loosening cap screws (A).



CAUTION: When disconnecting idler spring:

- Use locking pliers.
- Wear eye protection.

3. Disconnect idler spring (C).

4. Remove mower belt (D).

5. Clean and inspect belt for damage. DO NOT clean belt using parts cleaning solvent or belt dressing. They soften belt and shorten belt life.

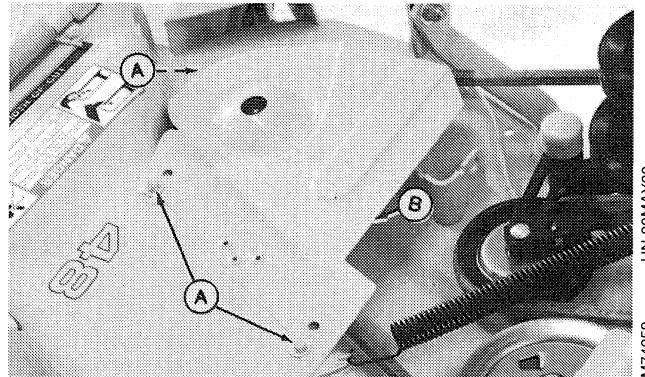
6. Clean upper mower deck and sheaves.

7. Install mower belt.

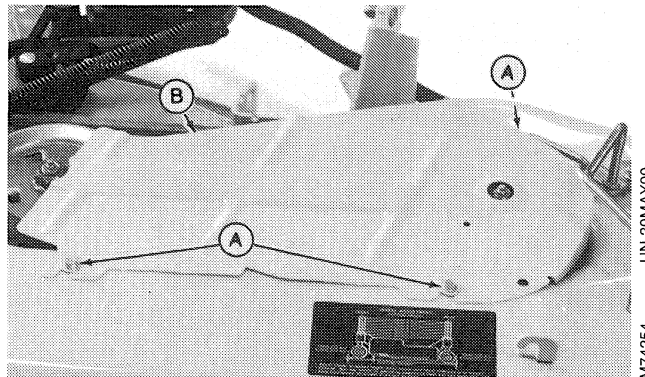
8. Connect idler spring.

9. Install belt guard covers.

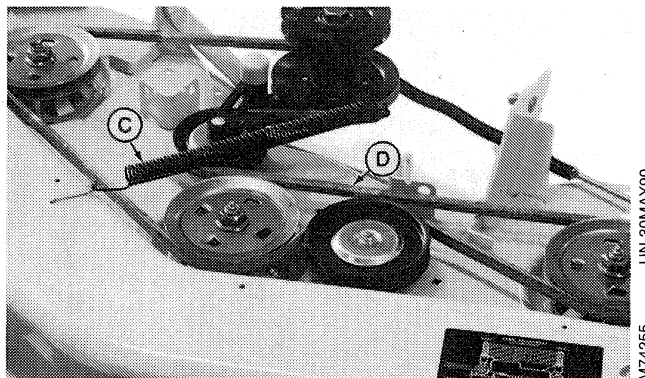
10. Install mower. (See INSTALLING MOWER DECK in this section.)



Right-Hand Side



Left-Hand Side

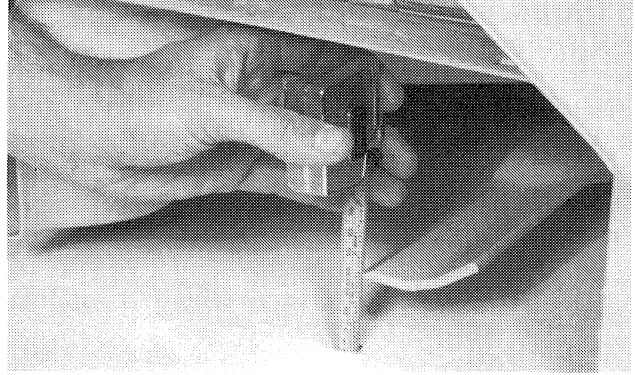


MX,SEFM,AM -19-07AUG90

CHECKING MOWER BLADES

To check for a bent blade:

1. Lower mower. Measure distance between blade tip and flat ground surface.
2. Turn blade 180 degrees. Measure distance between other blade tip and flat ground surface.
3. If the distance between the two measurements is more than 1/8 in. (3 mm), loosen blade bolt, rotate blade 90 degrees (1/4 turn) and tighten blade bolt. Then, repeat steps 1 and 2. If distance between two measurements is still more than 1/8" (3 mm), install new blade.



M32847 -UN-25AUG88

MX,SEFM,AN -19-07AUG90

REMOVING AND INSTALLING MOWER BLADES

1. Pull lift lever all the way back to mower. Put in transport position.

2. Put a block under each side of mower.

CAUTION: Mower blades may be sharp. When you handle blades, wear gloves or wrap a rag around blade.

3. Place a block of wood between blade and deck to prevent blade from turning when removing bolt.

4. Remove bolt, washer and blade (A).

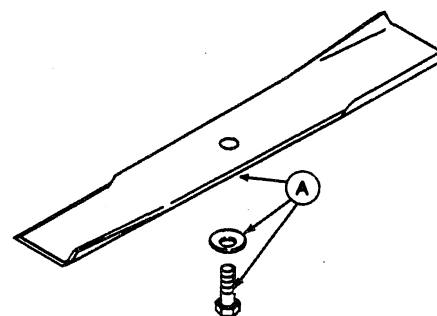
5. If a blade is dull, have it sharpened and balanced.

6. If a blade is damaged, install a new blade.

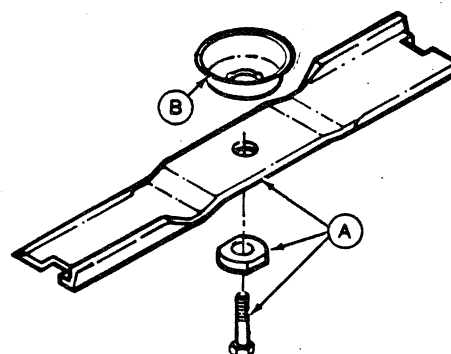
IMPORTANT: On 48-Inch Mower Only, make sure deflector cups (B) are in place between spindle and blade, if they have fallen out when removing blade. Make sure hexagon shaped hole in washer is in alignment with hexagon portion of spindle.

7. Install blade. Fasten it with washer and bolt. Make sure cupped side of washer is next to blade.

8. Tighten bolt to 55 lb-ft (75 N·m).



38-Inch Mower



48-Inch Mower

SHARPENING BLADES

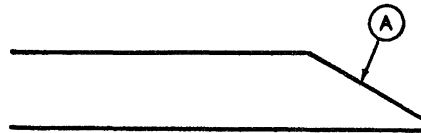


CAUTION: When you sharpen blades:

- Wear goggles and gloves.
- Balance blade after you sharpen it.
- Replace damaged blade immediately.

1. Sharpen blades with grinder, hand file, or electric blade sharpener.

2. Keep original bevel (A) when you grind. Blade should have 1/64 in. (0.40 mm) cutting edge.



MX,SEFM,AP -19-07AUG90

-UN-19OCT88
M61830

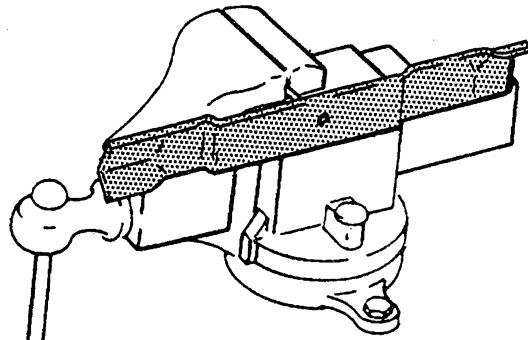
BALANCING BLADES

1. Clean blade.

2. Put blade on nail in vise or on vertical wall stud. Turn blade to horizontal position.

3. If blade is not balanced, heavy end of blade will drop.

4. Grind bevel of heavy end. Do not change blade bevel.



MX,SEFM,AQ -19-07AUG90

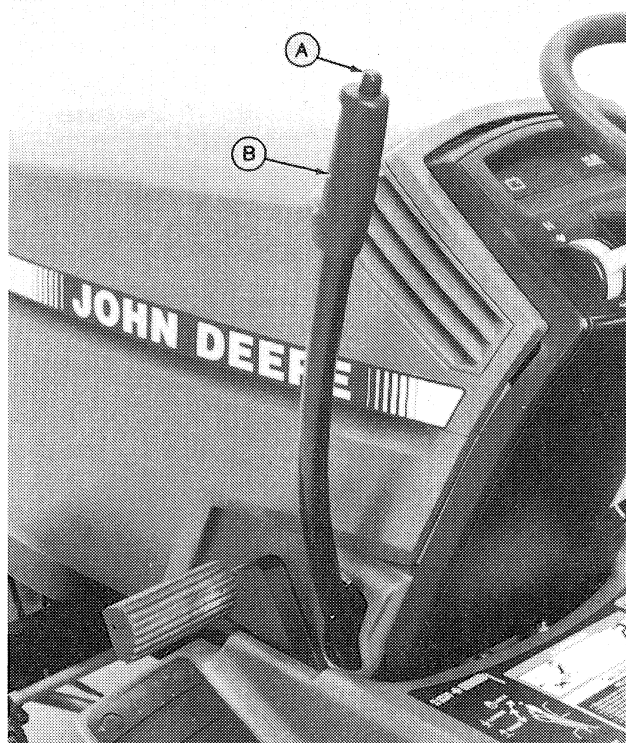
-UN-01SEP88
M61524

REMOVING MOWER

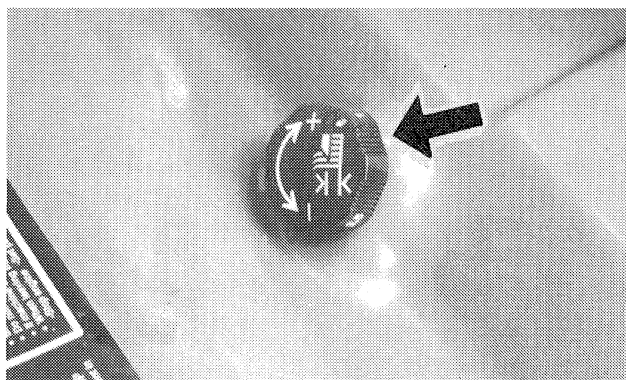
NOTE: Procedure for removing mower is basically the same for 38 and 48-inch mowers except for positioning 48-inch mower wheels.

⚠ CAUTION: STOP engine. Remove ignition key. Wait for all moving parts to STOP.

1. STOP engine. LOCK park brake. Remove key.
2. Depress thumb release (A) and pull lift lever (B) all the way back to put mower in transport position.
3. Turn mower depth control knob to blank mark (arrow) on knob.



M72203 -UN-24JUL90



M72260 -UN-30JUL90

MX,SEFM,AR -19-07AUG90

CAUTION: Do not attempt to remove mower or other attachments until first moving lift lever all the way forward in locked-down position shown. Lift assist spring pressure on rear draft arms could cause injury when attachment or mower is disconnected.

4. Move lift lever (C) all the way forward to lock lift lever in down position.

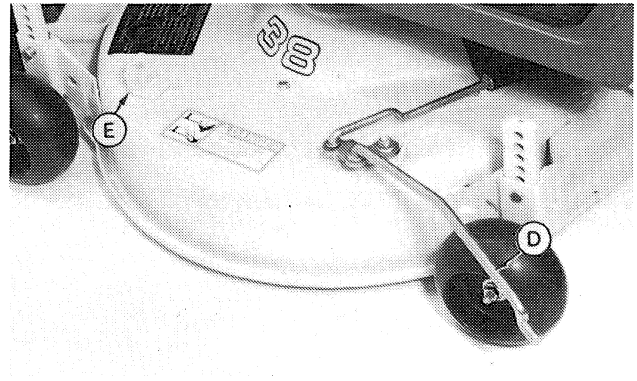


MX,SEFM,AS -19-07AUG90

M72173 -UN-24JUL90

5. Disconnect drive belt tension lever (D) from hook bracket (E) and pull lever out to relieve belt tension.

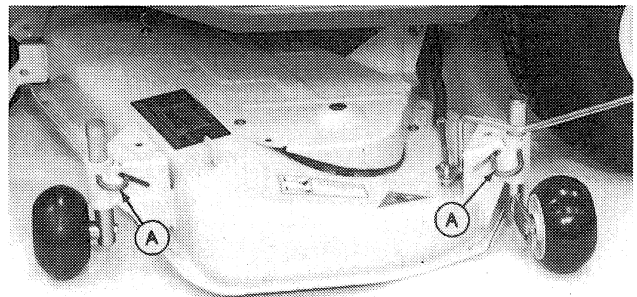
6. Remove drive belt from tractor and mower sheaves.



MX,SEFM,AT -19-07AUG90

M72186 -UN-24JUL90

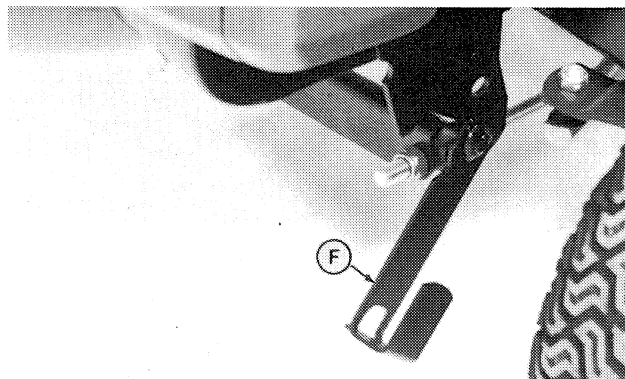
NOTE: On 48-inch mowers only, pull out on J-pins (A) and turn mower wheels on both sides of mower to position shown for ease in moving mower out from under tractor. Release J-pins in shaft holes to lock wheels in position.



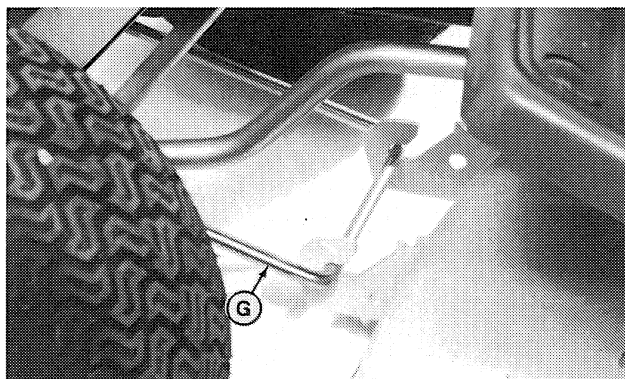
MX,SEFM,AT1 -19-07AUG90

M72262 -UN-07AUG90

7. Pull out and push down on lever (F) to disconnect front lift rod assembly (G) from mower. Remove lift rod attaching assembly from tractor and mower.



M72195
-UN-24JUL90



M72190
-UN-24JUL90

MX,SEFM,AU -19-07AUG90

CAUTION: Be sure lift lever is moved all the way forward in locked-down position before disconnecting mower from tractor.

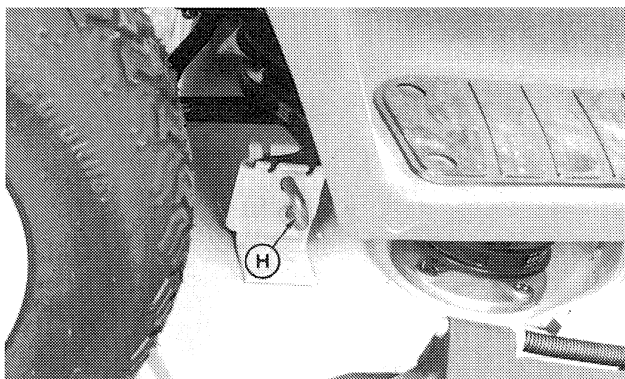
NOTE: It may be necessary to manually lift up on rear of mower deck to pull out J-pins.

8. Pull out on rear attaching J-pin (H) on each side of mower and turn pin to unlock position to disconnect mower from tractor.

CAUTION: Grip lift lever tightly and slowly release lift lever from locked-down position to prevent lever from snapping back at you.

9. Put tractor lift lever in transport position (all the way back).

10. Slide 38-inch mower out from under right side of tractor. Push or pull 48-inch mower out from right side of tractor.



M72194
-UN-24JUL90

MX,SEFM,AV -19-07AUG90

INSTALLING MOWER

CAUTION: Stop engine and remove ignition key. Wait for all moving parts to stop.

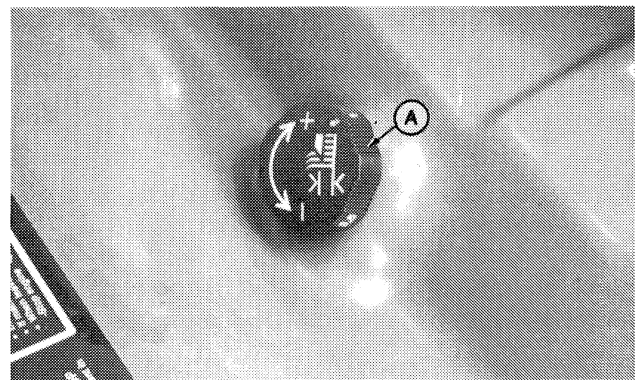
1. Stop engine and remove ignition key.

CAUTION: Lift lever is spring loaded and will snap rearward when lever is released from lock-down position, with no attachment on tractor.

2. Move lift lever (C) all the way back to transport position.
3. Slide 38-inch mower under tractor. Push 48-inch mower under tractor.
4. Turn mower depth control knob to blank mark (A) on knob.
5. Move lift lever (C) to lowered and locked-down position.



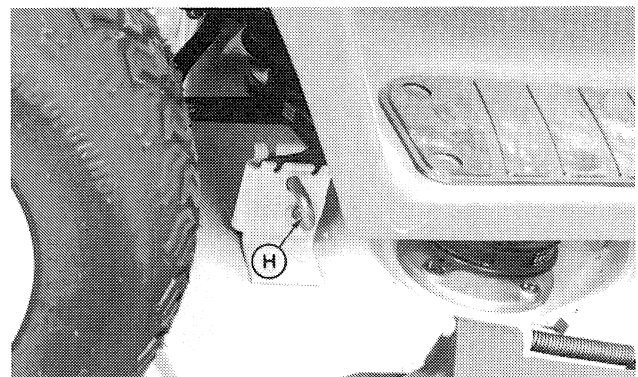
M72173 -UN-24JUL90



M72187 -UN-24JUL90

MX,SEFM,AW -19-07AUG90

6. Release rear J-pin (H) to attach rear mower deck lift brackets to lift arms on each side of mower.

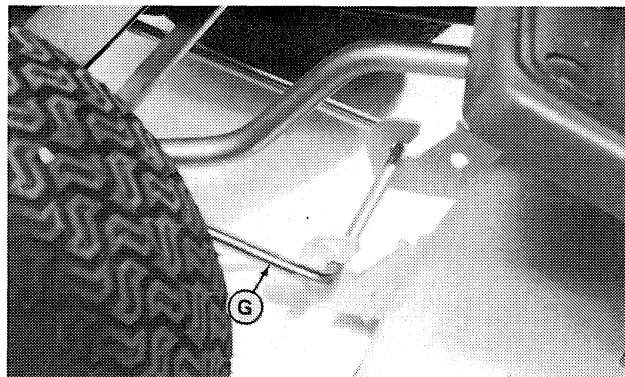


M72194 -UN-24JUL90

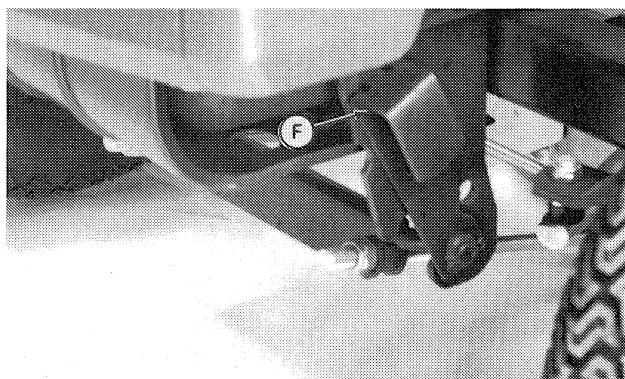
MX,SEFM,AX -19-07AUG90

6. Attach front lift rod assembly (G) to hooked end tractor mounting frame brackets and hooked end mower attaching brackets.

7. Push lever (F) up so pin on lever is locked in hole on left-hand side of tractor frame as shown.



M72190
-UN-24JUL90



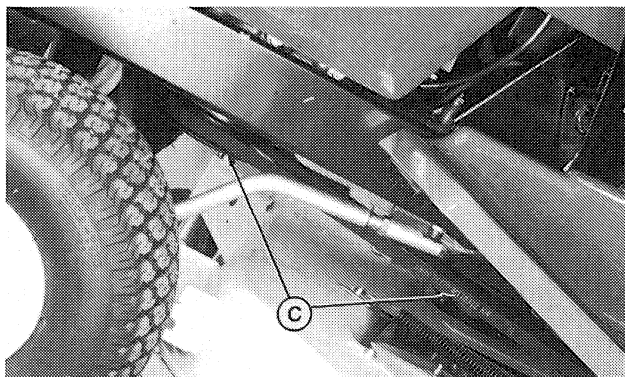
M72192
-UN-24JUL90

MX,SEFM,AY -19-07AUG90

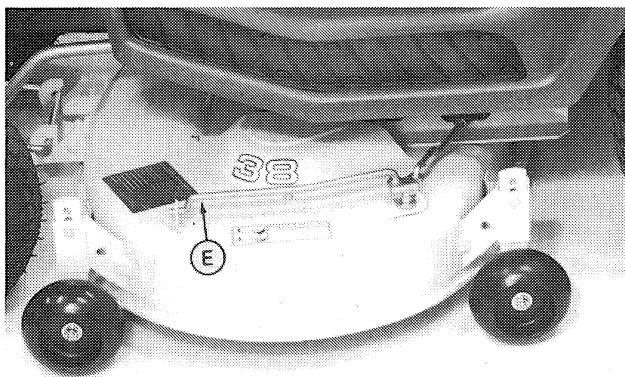
8. Install mower drive belt (C) on tractor drive sheave and mower drive sheave.

9. Push drive belt tension lever (E) in and over hook bracket on deck as shown.

10. Level mower. (See LEVELING MOWER FRONT-TO-REAR and SIDE-TO-SIDE in Operating the Mower section.) Put mower wheels on 48-inch mower in position shown on 38-inch mower at right.



M72246
-UN-24JUL90



M72250
-UN-24JUL90

MX,SEFM,AZ -19-07AUG90

Storage

STORING THE TRACTOR

IMPORTANT: Gasoline storage stabilizer should be used when storing the tractor:

- To prevent carburetor varnishing.
- To prevent partial plugging of carburetor jets.
- Either of these conditions can cause the engine to run lean and result in piston seizure and engine failure.

1. Put Gasoline Storage Stabilizer in fuel tank. Follow directions on can.
2. Run engine for at least 10 minutes to make sure stabilizer gets into the carburetor.
3. Change engine oil when engine is warm. (See CHANGING ENGINE OIL in Service section.)
4. Repair worn or damaged parts. Install new parts if necessary.
5. Service the air cleaner.
6. Lubricate all grease points to force out any moisture that may be present.
7. Remove and clean mower.
8. Check mower belts.
9. Wash the tractor.

NOTE: Start engine and engage PTO. Run engine for a couple of minutes to remove water. STOP engine.

10. Use a light oil on gauge wheel J-pins and shafts after washing mower and before storing mower.

11. Clean engine and area around it. Remove oil, grease, and dirt.

12. Apply paint to areas that need it to prevent rust.



CAUTION: Store battery where children cannot reach it.

13. Remove battery.

- Clean it.
- Check the electrolyte level.
- Charge the battery.
- Store battery in a cool, dry place to preserve battery life.

14. Store the tractor in a dry, protected place. If you store tractor outside, put a waterproof cover over it.

15. Put blocks or stands under tractor to take weight off tires. Let 1/3 of air out of tires.

16. Clean belts with a damp rag.

17. Close fuel shut-off valve under hood.

18. Remove and sharpen mower blades.

WORK IN VENTILATED AREA

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



DX,AIR

-19-04JUN90

TS220
-JUN-23AUG88

REMOVING TRACTOR FROM STORAGE

1. Check tire pressure.
2. Remove blocks or supports from under tractor.
3. Remove and clean spark plugs. Adjust gap.
4. Check battery electrolyte level. Charge battery if necessary.
5. Install battery.
6. Lubricate all grease points.
7. Make sure ALL shields and guards are in place.

8. Check oil level:

- Engine oil on all tractors.
- Hydrostatic transmission oil.



CAUTION: Avoid breathing exhaust fumes. Start engine ONLY in a well-ventilated place.

9. Open fuel shut-off valve.
10. Fill fuel tank with fresh, clean fuel.
11. Run engine 5 minutes before you put engine under load.

MX,STFM,B

-19-07AUG90

Attachments

The following John Deere attachments are available from your dealer for use with your LX Series Lawn Tractor:

- Grass Bagging Attachment
- Power Flow Attachment
- 38-Inch Snowthrower
- 42-Inch Front Blade
- Dump Cart
- Thatcher Attachment
- Leaf Mulcher
- Lip Attachment
- Front Wheel Weights
- Chrome Wheel Hub Caps
- 6 Gallon Integral Sprayer
- 15 Gallon Pull-Type Sprayer
- Rear Tractor Weights
- Tire Chains

MX,ATFM,A -19-07AUG90

Assembly

ACTIVATE BATTERY

IMPORTANT: Battery must be removed from tractor to prevent damage from spilled electrolyte.

1. Remove battery. (See CLEANING BATTERY in Service section.)

CAUTION: Battery acid is a poison and can cause burns. Avoid contact with skin, eyes and clothes. When you work around battery, protect eyes and face from battery fluid.

2. Use only battery-grade sulfuric acid electrolyte with 1.265 specific gravity.

3. Remove battery cell manifold cap.

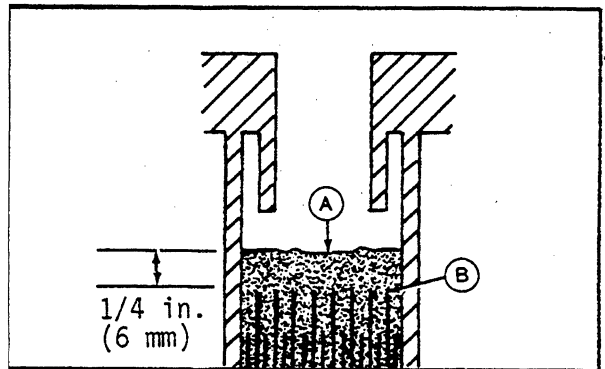
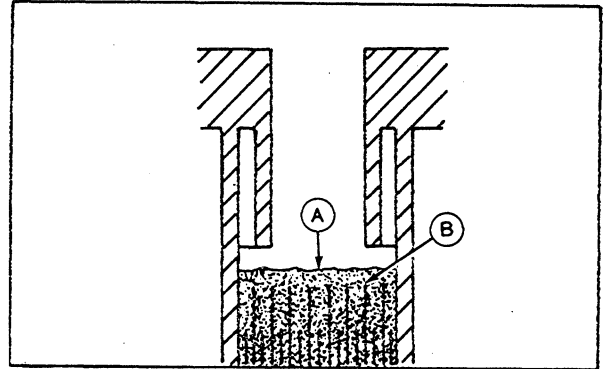
4. Slowly add electrolyte (A) until plates (B) are just covered. DO NOT fill to bottom ledge of filler tube.

CAUTION: Battery gases can explode. Keep cigarettes, sparks and flames away from battery. Provide adequate ventilation.

5. Charge battery at 5 to 10 amps for 30 minutes. Do not overcharge.

6. If electrolyte bubbles excessively, reduce charging rate. At full charge, electrolyte should have a specific gravity reading of 1.265 at 80°F (27° C).

7. After charging, add electrolyte (A) until level is 1/4 in. (6 mm) above plates (B). Do not fill to bottom ledge of filler tube.



8. Install battery cell manifold cap.

9. Install battery. Attach overflow hose to battery cell manifold cap.

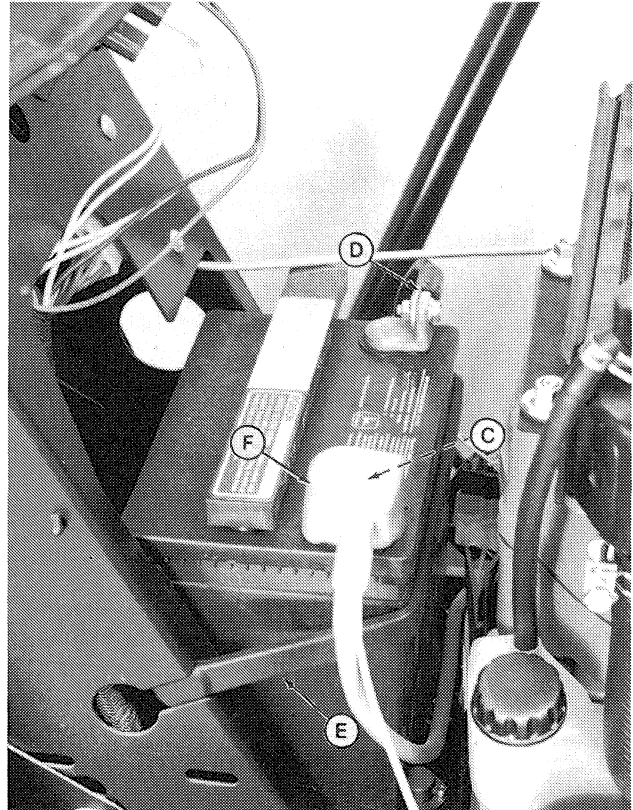
CAUTION: To prevent short circuits, connect the positive battery cable first, then the negative cable.

10. Connect positive battery cable (C) to positive (+) terminal.

11. Connect negative battery cable (D) to negative (—) terminal.

12. Install rubber hold-down strap (E).

13. Apply a coating of petroleum jelly on battery terminals. Put rubber cover (F) over positive (+) battery terminal.



MX,ASFM,B -19-07AUG90

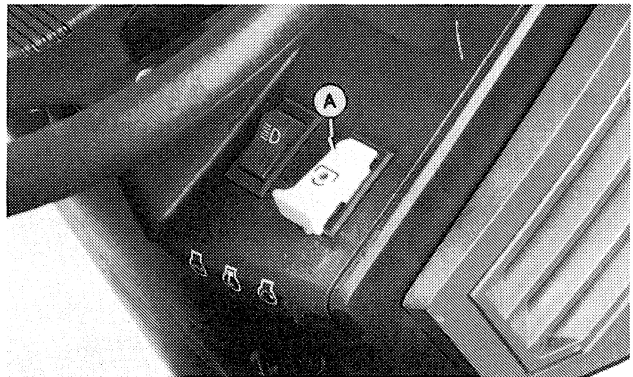
M72251 -UN-24JUL90

BREAK-IN ELECTRIC PTO CLUTCH

1. Start the engine.

2. Move throttle lever to the halfway position.

3. Turn PTO switch (A) on and off 8 to 10 times in 4 to 5-second intervals at no load.



MX,ASFM,C -19-07AUG90

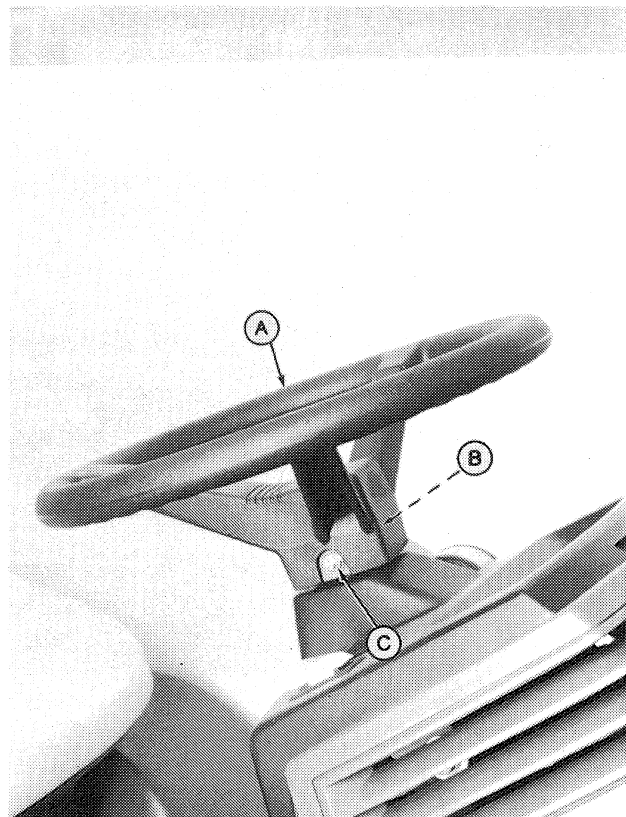
M72207 -UN-24JUL90

INSTALL STEERING WHEEL

1. Put front wheels in straight forward position.
2. Put John Deere NEVER-SEEZ® Lubricant or equivalent on splines of steering shaft.

NOTE: NEVER-SEEZ is a trademark of the Never-Seez Corp.

3. Install steering wheel (A) with John Deere logo in upright position.
4. Install Phillips Head shoulder bolt (B) from left side of steering wheel. Drive in bolt until head of bolt contacts steering wheel.
5. Install washer and nut over slot (C) on right side of steering wheel.
6. Tighten locknut until snug. Do not tighten locknut to pull washer or head of bolt into steering wheel.



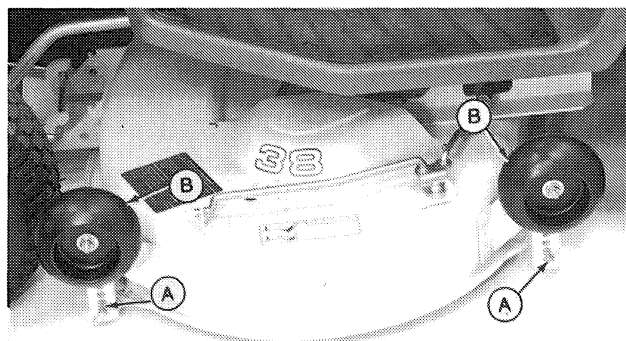
MX,ASFM,D -19-07AUG90

M72252
-UN-24JUL90

POSITION 38-INCH MOWER WHEELS

NOTE: Lift mower deck all the way up by pulling lift lever all the way back.

1. Remove spring locking pins and drilled pins (A).
2. Lift wheels (B) out of brackets.

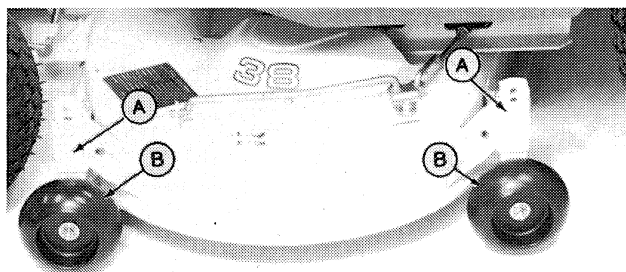


MX,ASFM,E -19-07AUG90

M72253
-UN-24JUL90

3. Install wheels (B) in brackets as shown. Secure wheels in position with drilled pins and spring locking pins (A).

NOTE: Check mower level front-to-rear and side-to-side as described in Operating the Mower section.

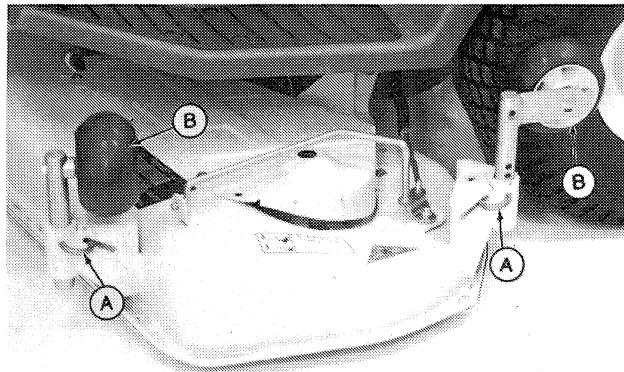


MX,ASFM,F -19-07AUG90

M72254
-UN-24JUL90

POSITION 48-INCH MOWER WHEELS

1. Pull out on J-pins (A) and remove mower wheel assemblies (B) from brackets.
2. Lift mower all the way up with lift lever. Hoist rear of tractor to install wheel assemblies.



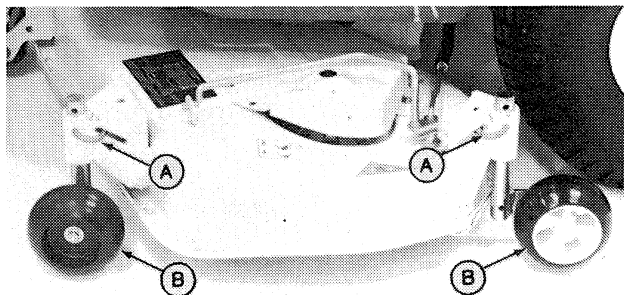
MX,ASFM,G -19-07AUG90

M72255 -UN-24JUL90

3. Install wheel assemblies (B) in brackets and release J-pins (A) to lock wheels in place.

NOTE: Check mower level and adjust mower wheels as described in Operating the Mower section.

4. Remove hoist from rear of tractor.



MX,ASFM,H -19-07AUG90

M72256 -UN-24JUL90

Specifications

TRACTOR SPECIFICATIONS

MODEL	LX172 TRACTOR, GEAR	LX176 TRACTOR, HYDROSTATIC	LX178 TRACTOR, HYDROSTATIC	LX186 TRACTOR, HYDROSTATIC
ENGINE:				
Type	John Deere "K" Series	John Deere "K" Series	John Deere "K" Series	John Deere "K" Series
Model Number	FC420V	FC420V	FD440V	FC540V
Horsepower	14HP(10.4KW)	14HP(10.4KW)	15HP(11.1KW)	17HP(12.6KW)
Number of Cylinders	One	One	Two (V-Twin)	One
Crankshaft Alignment	Vertical	Vertical	Vertical	Vertical
Stroke/Cycle	Four	Four	Four	Four
Bore	3.5 in.(89 mm)	3.5 in. (89 mm)	2.64 in. (67 mm)	3.5 in. (89 mm)
Stroke	2.68 in. (68 mm)	2.68 in. (68 mm)	2.44 in. (62 mm)	3.38 in. (86 mm)
Displacement	25.8 cu. in. (423 cc)	25.8 cu. in. (423 cc)	26.7 cu. in. (437 cc)	32.64 cu. in. (535 cc)
Cylinder Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Speed(Fast), No Load	3350 rpm	3350 rpm	3350 rpm	3350 rpm
Speed(Idle), No Load	1550 rpm	1550 rpm	1550 rpm	1550 rpm
Ignition	Solid-State	Solid-State	Solid-State	Solid-State
Starting System	Electric	Electric	Electric	Electric
Cooling System	Air	Air	Liquid	Air
Air Filter	Dry, Replaceable w/Foam Pre-Cleaner	Dry, Replaceable w/Foam Pre-Cleaner	Dry, Replaceable w/Foam Pre-Cleaner	Dry, Replaceable w/Foam Pre-Cleaner
Lubrication System	Pressure w/Filter	Pressure w/Filter	Pressure w/Filter	Pressure w/Filter
Crankcase Capacity	3.6 pt (1.7 L)	3.6 pt (1.7 L)	3.2 pt (1.5 L)	4.2 pt (2.0 L)
FUEL SYSTEM:				
Fuel Tank Location	Rear	Rear	Rear	Rear
Capacity	2.5 gal (9.5 L)	2.5 gal (9.5 L)	2.5 gal (9.5 L)	2.5 gal (9.5 L)
Type	Regular Leaded or Unleaded	Regular Leaded or Unleaded	Regular Leaded or Unleaded	Regular Leaded or Unleaded

MX,SPFM,A -19-07AUG90

Specifications

MODEL	LX172 TRACTOR, GEAR	LX176 TRACTOR, HYDROSTATIC	LX178 TRACTOR, HYDROSTATIC	LX186 TRACTOR, HYDROSTATIC
ELECTRICAL SYSTEM:				
Charging System	Flywheel Alternator	Flywheel Alternator	Flywheel Alternator	Flywheel Alternator
Capacity	13 Amp Regulated	13 Amp Regulated	15 Amp Regulated	15 Amp Regulated
Battery Type	Lead-Acid	Lead-Acid	Lead-Acid	Lead-Acid
Battery Voltage	12 Volts	12 Volts	12 Volts	12 Volts
Battery Reserve	35 min.	35 min.	35 min.	35 min.
Capacity at 25 Amp				
Battery Cold	255 Amp	255 Amp	255 Amp	255 Amp
Cranking Capacity at 0°F (18°C)				
DRIVETRAIN:				
Transmission Type	Transaxle	Hydrostatic	Hydrostatic	Hydrostatic
Number of Speeds	5 Forward, 1 Reverse	Infinite	Infinite	Infinite
TRAVEL SPEED (GEAR TRACTOR):				
First Gear	1.4 mph (2.3 kmh)			
Second Gear	2.1 mph (3.4 kmh)			
Third Gear	3.2 mph (5.1 kmh)			
Fourth Gear	4.1 mph (6.6 kmh)			
Fifth Gear	5.2 mph (8.4 kmh)			
Reverse	2.3 mph (3.8 kmh)			
TRAVEL SPEED (HYDROSTATIC TRACTOR):				
Forward		0-5.5 mph (0-8.8 kmh)	0-5.5 mph (0-8.8 kmh)	0-5.5 mph (0-8.8kmh)
Reverse		0-2.5 mph (0-4 kmh)	0-2.3 mph (0-3.7 kmh)	0-2.5 mph (0-4 kmh)
Transaxle Capacity	2.2 pt (1 L)			
Hydrostatic				
Transmission Capacity		2.5 pt (1.2 L)	2.5 pt (1.2 L)	2.5 pt (1.2 L)

MX,SPFM,A1 -19-07AUG90

Specifications

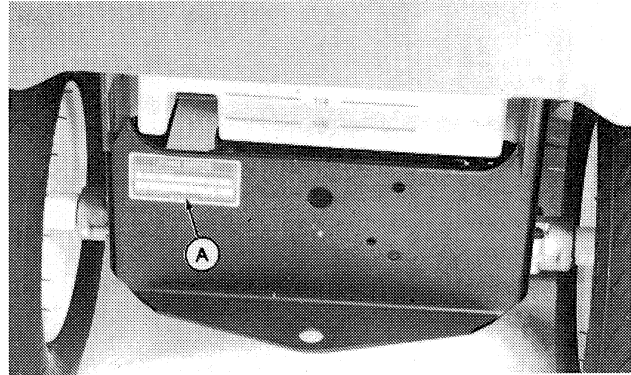
MODEL	LX172 TRACTOR, GEAR	LX176 TRACTOR, HYDROSTATIC	LX178 TRACTOR, HYDROSTATIC	LX186 TRACTOR, HYDROSTATIC
CHASSIS:				
Wheelbase	45.7 in. (116.5 cm)	45.7 in. (116.5 cm)	45.7 in. (116.5 cm)	45.7 in. (116.5 cm)
Overall Length	65.2 in. (165.5 cm)	65.2 in. (165.5 cm)	65.2 in. (165.5 cm)	66.1 in. (168 cm)
Overall Height	39.8 in. (101.0 cm)	39.8 in. (101.0 cm)	39.8 in. (101.0 cm)	40.2 in. (102 cm)
Overall Width	49.7 in. (126.2 cm)	49.7 in. (126.2 cm)	49.7 in. (126.2 cm)	59.2 in. (150.4 cm)
Turning Radius, Inside Rear Wheel	21 in. (53.3 cm)	21 in. (53.3 cm)	21 in. (53.3 cm)	20 in. (50.8 cm)
Turning Radius, Outside Front Wheel	74 in. (188 cm)	74 in. (188 cm)	74 in. (188 cm)	74 in. (188 cm)
Wheel Tread, Front	29.1 in. (74 cm)	29.1 in. (74 cm)	29.1 in. (74 cm)	29.1 in. (74 cm)
Wheel Tread, Rear	26.1 in. (66.4 cm)	26.1 in. (66.4 cm)	26.8 in. (68 cm)	26.8 in. (68 cm)
Tires, Front & Rear	Turf Type	Turf Type	Turf Type	Turf Type
Front Tire Size	15x6.00-6	15x6.00-6	15x6.00-6	15x6.00-6
Rear Tire Size	20x10.00-8	20x10.00-8	20x10.00-8	20x10.00-8
Average Inflation Pressure				
Front Tire	10 PSI (69 KPA)	10 PSI (69 KPA)	10 PSI (69 KPA)	12 PSI (83 KPA)
Rear Tire	8 PSI (55 KPA)	8 PSI (55 KPA)	8 PSI (55 KPA)	10 PSI (69 KPA)
BRAKES:				
Location	Transmission	Transmission	Transmission	Transmission
Type	Disk	Band	Band	Band
Parking	Right Pedal, Clutch Interlock	Right Pedal	Right Pedal	Right Pedal
CLUTCH:	Left Pedal, V-Belt	None	None	None
STEERING:	Sector and Pinion	Sector and Pinion	Sector and Pinion	Sector and Pinion
PTO CLUTCH:	Engine-Mounted, Electric	Engine-Mounted, Electric	Engine-Mounted, Electric	Engine-Mounted, Electric
LIFT TYPE:	Mechanical with Adjustable Stop	Mechanical with Adjustable Stop	Mechanical with Adjustable Stop	Mechanical with Adjustable Stop
POWER CUTTING WIDTH:	38 in. (970 mm)	38 in. (970 mm)	38 in. (970 mm)	48 in. (1219 mm)
NUMBER OF BLADES:	Two	Two	Two	Three
CUTTING HEIGHT: (Approximate)	1 to 4 in. (25 to 102 mm)	1 to 4 in. (25 to 102 mm)	1 to 4 in. (25 to 102 mm)	1 to 4 in. (25 to 102 mm)
SOUND RATING:				
Operator's Ear (A-Weighted Sound Level)	Not Available	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available
NET WEIGHT (NO FUEL):	525 lb (238kg)	535 lb (243kg)	540 lb (245kg)	590 lb (268kg)

RECORDING PRODUCT IDENTIFICATION NUMBER

Write your tractor's 13-digit product identification number (A) below.

Your John Deere dealer needs this number when you order parts.

Product Identification Number _____



M72197 -JUN-24/JUL90

MX,SPFM,B -19-07AUG90

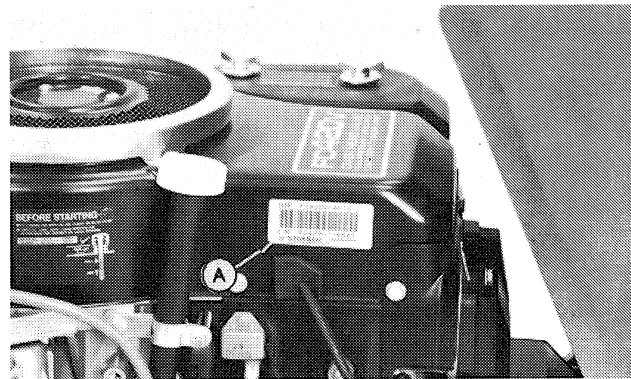
RECORDING ENGINE SERIAL NUMBER

NOTE: LX172 Tractor illustrated.

Write your engine serial number (A) below.

Your John Deere dealer needs this number when you order parts

Engine Serial Number _____



M72181 -JUN-30/JUL90

MX,SPFM,C -19-07AUG90

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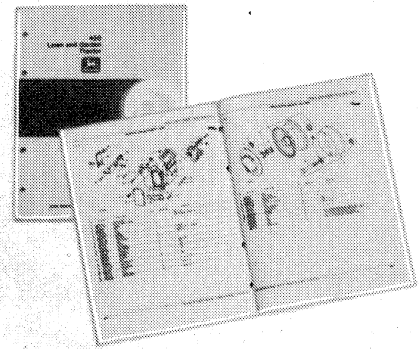
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John Deere Service Literature Available

PARTS CATALOG

The parts catalog lists service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



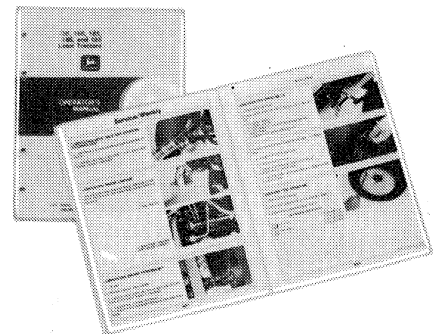
DX,PARTS -19-04JUN90

TS189
-UN-17JAN89

OPERATOR'S MANUAL

The operator's manual provides safety, operating, maintenance, and service information about John Deere machines.

An extra copy of the operator's manual is important if the copy furnished with your machine is misplaced.

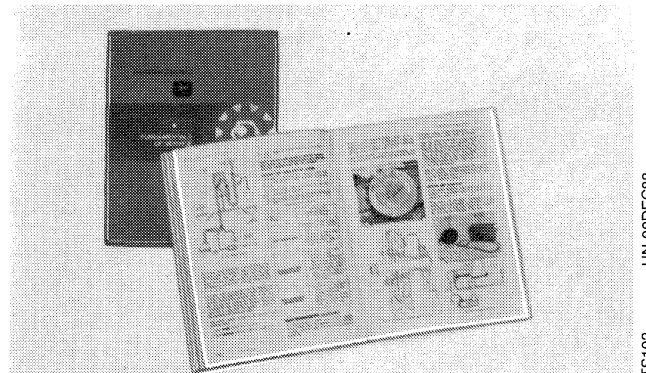


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TS190
-UN-17JAN89

FUNDAMENTALS OF SERVICE MANUALS

These basic manuals cover most makes and types of machines. FOS manuals tell you how to SERVICE machine systems. Each manual starts with basic theory and is fully illustrated with colorful diagrams and photographs. Both the "whys" and "hows" of adjustments and repairs are covered in this reference library.



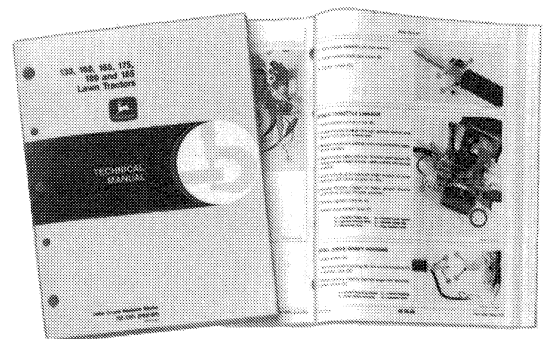
DX,FOS -19-04JUN90

TS193
-UN-02DEC88

TECHNICAL AND SERVICE MANUALS

Technical and service manuals are service guides for your machine. Included in the manual are specifications, diagnosis, and adjustments. Also illustrations of assembly and disassembly procedures, hydraulic oil flows, and wiring diagrams.

Component technical manuals are required for some products. These supplemental manuals cover specific components.



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John Deere Service Keeps You On The Job



John Deere is at your service when you need it

John Deere takes pride in providing superior service. We'll be around when you need us. To help minimize downtime, we maintain a large and varied parts inventory. Precision tools and testing equipment enable our dealerships to locate and correct troubles quickly. We hold regular training schools for service technicians so they know your equipment and how to maintain it. Our goal is to provide prompt, efficient service through competent dealerships.

Should you experience any difficulty obtaining satisfactory parts or service:

- Discuss your problem with your dealership service manager.
- If still unable to properly resolve, see the dealership manager.
- If you have a persistent problem that your dealership is unable to satisfy, contact the John Deere sales branch in the area in which you live. (See the map below to locate the sales branch.) The sales branch will also help you locate the dealership nearest you.

Sales Branch

1. JOHN DEERE COMPANY
701 Georgeville Road
Columbus, OH 43228
614-275-1500

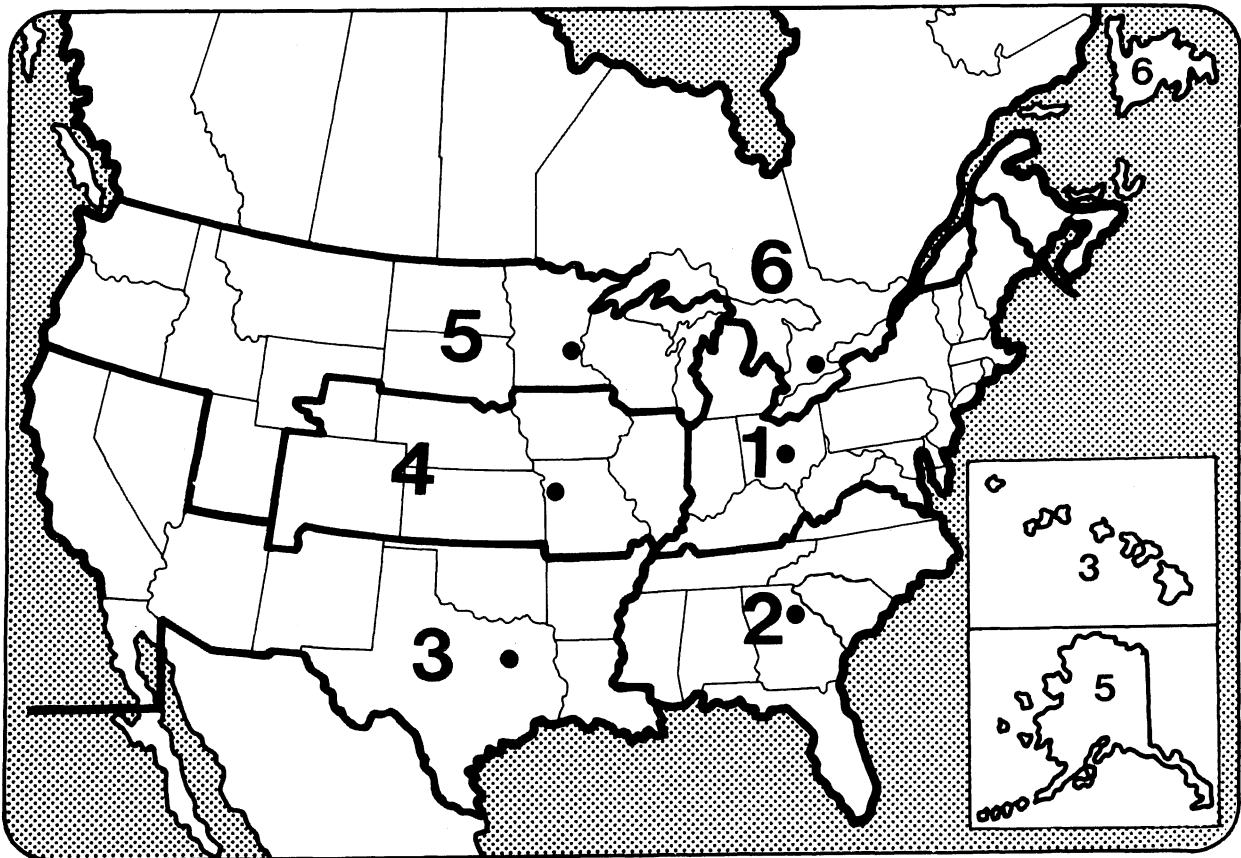
2. JOHN DEERE COMPANY
2001 Deere Dr.
Conyers, GA 30208
404-922-7040

3. JOHN DEERE COMPANY
10650 Hines Boulevard
Dallas, TX 75220-2635
214-352-1701

4. JOHN DEERE COMPANY
3210 East 85th Street
Southeast Station
Kansas City, MO 64132-2586
816-361-4000

5. JOHN DEERE COMPANY
2001 West 94th Street
Bloomington, MN 55431-2311
612-887-6200

6. JOHN DEERE COMPANY
South Service Road at Hunter
Grimsby, Ontario, Canada L3M 4H5
416-945-9281



TS-214 (Jun-89)

DX,IBC,2 -19-27JUL90

TS214 -19-18JUL90

